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Birds

Second Edition : Revised and Rewritten.

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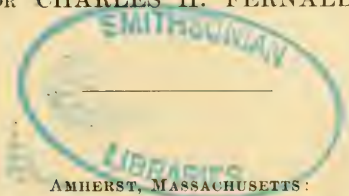
BIRDS OF AMHERST

AND VICINITY,

INCLUDING NEARLY THE WHOLE OF HAMPSHIRE COUNTY,
MASSACHUSETTS.

HUBERT LYMAN CLARK.

WITH AN INTRODUCTION BY
PROFESSOR CHARLES H. FERNALD, PH. D.



AMHERST, MASSACHUSETTS:
Press of Carpenter & Morehouse.

1906.

INTRODUCTORY.

The importance of a thorough knowledge of our birds and their habits cannot be over-estimated. Some species are exceedingly useful, others are positively injurious, while still others are probably neither beneficial nor injurious. The beneficial birds comprise those which feed mainly on insects, and when we remember how prolific our insect pests are and that these birds are very efficient agents in reducing their numbers, we can well understand how important it is to be able to distinguish the beneficial from the injurious, in order that we may protect the former and destroy the latter.

The author of this work, an associate member of the American Ornithologists' Union, has taken great pains to incorporate into this paper all desirable information concerning the birds of this region, including a brief, technical description of each species, the times of migrating, nesting, and food habits, whether beneficial or injurious, and a very useful key for the determination of the species. It is believed that very few, if any, birds, which occur in Hampshire County, have been omitted.

We can most cheerfully recommend this work to those interested in ornithology, as well as to farmers and fruit growers in this region.

C. H. FERNALD.

Amherst, Mass., April 15, 1887.

PREFACE TO SECOND EDITION.

It is now nearly twenty years since the first edition of this little book appeared, the result of several years' diligent field work in and around Amherst. Owing to a considerable local interest in birds, the edition was soon exhausted and for many years now the work has been out of print. As there has been a number of calls for copies, which could not be supplied, a second edition has seemed worth while, although the author is no longer a resident of Amherst, and has done no field work there for many years. In preparing this new edition it has seemed desirable to make some radical changes in the arrangement of the species, and the old division into three groups, "regular," "irregular," and "extremely rare," which really served no useful purpose, has been discarded. The "artificial key" has also been rearranged to conform to those now so commonly used for both flowers and animals, particularly those in Chapman's "Handbook of the Birds of Eastern North America." The names used are also those of that very useful "Handbook," to which the more advanced student will frequently wish to refer. One new feature, which it is hoped will prove a really useful addition, is the "field key," but it must be remembered that identifications made by any such easy method are not to be relied on unless the observations are made with good field glasses, under favorable conditions, and are confirmed by reference to a full description, such as those given in Coues' "Key to North American Birds." Although considerable field work was done by the author in the years 1887-92, and since then by others interested, only three new

species have been added to the list of Amherst birds; these are the golden eagle, the pine finch and the evening grosbeak. But seven species are added, which have been recorded from other parts of the county. Additional notes on other species, particularly in reference to the spring arrivals, have been very kindly furnished me by Miss Margaret Morse. Aside from these, little new material is incorporated in this edition. The number of species included is only 185, which is some 40 less than the number given in Morris' "Birds of Springfield" (1901) but the area considered is much less than that of the Springfield list, and has much less topographical variety. Nevertheless it is to be expected that a number of additions will yet be made to the Amherst fauna, and if this little book assists anyone to detect such species, or in any other way maintains or adds to the interest in, and love for, our native birds, it will have fully served its purpose.

In conclusion it is but just to put on record the very great help which the writer received in preparing the text originally, from Mr. W. A. Stearns, then of Amherst, and Mr. E. O. Damon of Northampton. The latter provided most of my information regarding the water fowl and larger birds of prey. Mr. C. R. Kenfield of Amherst also assisted in many ways and collected a number of rarer species. Besides so kindly furnishing the introduction to the first edition, Professor Fernald has been so good as to turn over to me a number of his field notes. Seven of the additions to the present list are made on the authority of Mr. Robert O. Morris of Springfield and are taken from his list previously referred to, and from some notes of his in the "Auk," October, 1903. To these gentlemen, and to many others who have contributed sympathy and encouragement, is hereby extended the most sincere thanks of

THE AUTHOR.

FIELD KEY

To the Birds of Amherst: an artificial arrangement based on size, color, habitat, habits and notes.

NOTE WELL: This key is not intended to identify immature birds; its use in the *fall* is therefore liable to lead to mistakes and disappointment.

Size large; as big as a crow or bigger. Group I.

Size medium; as big as an English sparrow or bigger, but smaller than a crow. Group II.

Size small; smaller than an English sparrow. Group III.

NOTE WELL: This use of size is obviously purely relative. There is room for difference of opinion as to whether certain birds are "as big as an English sparrow" or not. Moreover individuals differ. If in doubt, try Group II, and if that fails to lead to a satisfactory result, try Group III.

Group I. Large birds.

1. Usually seen swimming on surface of still water, or diving, or flying high up with outstretched neck.

A. About 3 feet long.

General coloration brownish-gray; bill 2 inches, blunt,

CANADA GOOSE.

General coloration black and white; bill 3 inches, acute,

LOON.

- B. Less than $2\frac{1}{2}$ feet long.
- a. No conspicuous white marks.
 Purple, metallic patch on wing; bill blunt, flat,
DUSKY DUCK.
 No metallic patch on wing; bill acute, compressed,
HOLBOELL'S GREBE.
 - aa. More or less white on head, neck or wings.
 - b. With compressed, semi-circular crest,
HOODED MERGANSER.
 - bb. No such crest.
 - c. Little white on wings.
 A loose flowing crest; breast spotted,
WOOD DUCK.
 No crest at all; breast unspotted, not black,
PIN-TAILED DUCK,
 No crest; head, neck, upper breast black,
BRANT.
 - cc. Much white on wings.
 - d. Much blue on wings,
SHOVELLER DUCK.
 - dd. No blue on wings.
 A slight, loose crest,
RED-BREASTED MERGANSER.
 No distinct crest,
COMMON MERGANSER.
2. Long-legged wading birds.
- A. Plumage white.
 - Length over 3 feet,
AMERICAN EGRET.
 - Length about 2 feet,
SNOWY HERON.
 - B. Plumage not white.
 - a. Length over $3\frac{1}{2}$ feet,
GREAT BLUE HERON.
 - aa. Length from 2 to $2\frac{1}{2}$ feet.
 Prevailing colors buff and black; a black patch on
 side of neck,
BITTERN.
 Prevailing colors not buff and black; no black patch
 on side of neck,
NIGHT HERON.

3. Ground birds with short legs.
Plumage brown and gray, RUFFED GROUSE.
4. Birds usually seen flying or perching, not having notably long neck or legs.
 - A. Plumage mainly white or very light colored.
Face flattened, eyes in front; uncommon winter visitor,
SNOWY OWL.
Face not flattened; eyes on sides of head; accidental visitor, near water, HERRING GULL.
 - B. Plumage black,
Length under 20 inches, CROW.
Length over 24 inches, RAVEN.
 - C. Plumage neither black nor nearly white.
 - a. Face flat; eyes in front; bill short and strongly hooked.
 - b. Head with prominent tufts of feathers, like ears,
GREAT HORNED OWL.
 - bb. Head without such feather tufts.
Length only 20 inches, BARRED OWL.
Length 27 inches, GREAT GRAY OWL.
 - aa. Face not flat; eyes on sides of head.
 - b. Length over $2\frac{1}{2}$ feet; extent of wings about 6 feet.
Lower half of tarsus bare; head of adult white,
BALD EAGLE.
Tarsus feathered to base of toes; head not white,
GOLDEN EAGLE.
 - bb. Length 2 feet or less; extent under 5 feet.
 - c. Upper tail coverts conspicuously white,
MARSH HAWK.
 - cc. Upper tail coverts not conspicuously white.
 - d. General coloration black (or very dark brown) and white.
Almost pure white beneath, haunting rivers and lakes,
FISH HAWK.

Not almost white beneath, haunting meadows,

ROUGH-LEGGED HAWK.

dd. Not notably black and white or fond of water or open meadows.

e. Strong, aggressive birds with short, blunt wings and long tail and feet.

Less than one-half of tarsus bare ; length 2 feet ; rare, GOSHAWK.

Less than two-thirds of tarsus bare ; length $1\frac{1}{2}$ feet ; common, COOPER'S HAWK.

ee. Strong, aggressive birds with long, pointed wings and short tail and feet ; very rare.

Length about $1\frac{1}{2}$ feet ; dark bluish-ash above, DUCK HAWK.

Length 2 feet ; not bluish-ash above,

GYRFALCON.

eee. Heavy, woodland birds, with broad wings and tail, the latter not notably long ; rather slow ; common.

Area on breast white and unspotted ; general cast of plumage not fulvous,

RED-TAILED HAWK.

No unspotted area on breast ; general cast of plumage fulvous, RED-SHOULDERED HAWK.

Group II. Birds of Medium Size.

1. Swimming Birds of Ponds or Streams.

A. Length 10 inches or less ; pure white beneath,

DOVEKIE.

B. Length over a foot.

Dark slate color ; bill white ; length 15 inches, COOT.

Dark brownish above ; shining white beneath ; length 13 inches, COMMON GREBE.

Back black and white ; wing coverts not blue,

GREEN-WINGED TEAL.

Back varied with brown and black ; wing coverts,
sky-blue,

BLUE-WINGED TEAL.

2. Birds of Open Field, Marsh or Shore, with long, bare legs.

A. More or less pure white beneath, with or without spots.

a. Upper parts more or less variegated and streaked with black, brown and lighter shades.

b. Length over 10 inches.

Bill $2\frac{1}{2}$ in. ; crown black with pale median stripe ;
legs greenish-gray,

WILSON'S SNIPER.

Bill $1\frac{1}{2}$ in. ; crown not as above ; legs chrome-
yellow,

YELLOW-LEGS.

Bill 1 in. ; crown variegated ; legs not bright
yellow,

UPLAND PLOVER.

bb. Length under 9 inches.

Length over 8 in. ; under parts slightly streaked,
not clearly spotted,

SOLITARY SANDPIPER.

Length under 8 in. ; under parts distinctly spotted,
SPOTTED SANDPIPER.

Length under 6 in. ; under parts streaked and
spotted,

LEAST SANDPIPER.

aa. Upper parts uniform ashy or grayish-brown, not
streaked ; a white collar around neck, often accom-
panied by a black one.

Length over 9 in. ; upper tail coverts tawny, KILDEER.

Length under 7 in. ; upper tail coverts white,

PIPING PLOVER.

B. Not white beneath.

a. Length 1 to $1\frac{1}{2}$ feet ; bill long, 2 inches or more ;
legs long and bare.

- Prevailing colors pale greenish olive and gray ; throat white, CLAPPER RAIL.
- Prevailing colors dark green and brown ; throat not white, GREEN HERON.
- Prevailing colors brownish-yellow and some dark shade, LEAST BITTERN.
- Prevailing colors grayish-brown and buff, streaked with black, HUDSONIAN CURLEW.
- aa. Length 9 to 12 inches ; bill long, $1\frac{1}{2}$ inches or more ; legs not notably long and bare.
- Prevailing tints dark brown, tawny-olive and especially cinnamon-red ; difficult to flush ; flight weak, VIRGINIA RAIL.
- Prevailing tints black, gray, russet and especially pale brown ; flight powerful, rapid and zigzag, WOODCOCK.
- aaa. Length 6 to 9 inches ; bill short, less than an inch ; legs rather short.
- Length over 8 in. ; black, olive-brown, slate gray and white, CAROLINA RAIL.
- Length under 7 in. ; black, pale brownish-yellow and white, YELLOW RAIL.
3. Raptorial Birds, with stout, hooked beak and powerful claws.
- A. Eyes in front ; face flat ; bill short
- a. Length over 1 foot.
- Tufts of feathers, like ears, present, conspicuous ; brownish-black, grayish-white and tawny, LONG-EARED OWL.
- Ear-tufts present, very small ; dark brown and pale ochrey, SHORT-EARED OWL.
- Ear-tufts wanting ; almost black and white, HAWK OWL.
- aa. Length less than 10 inches.
- Ear-tufts present, SCREECH OWL.
- Ear-tufts wanting, SAW-WHET OWL.

B. Eyes on sides of head; face not flat; bill not specially short.

a. Extent nearly 3 feet; wings broad; tail relatively short; coloration dark brown and white,

BROAD-WINGED HAWK.

aa. Extent 2 feet or less; wings and tail long.

b. Feet not noticeably long and slender.

Back and tail bright rufous with more or less black; under parts white with more or less streaking; summer resident, SPARROW HAWK.

Upper parts bluish-ash or dark umber-brown; under parts whitish, more or less heavily streaked with blackish; winter visitor, PIGEON HAWK.

bb. Feet long and slender; above dark slate color; beneath tawny-white cross-barred or streaked with rufous, SHARP-SHINNED HAWK.

4. Tree-climbing Birds, with straight, sharp beak and stiff tail with pointed feathers; flight very undulating.

A. Length a foot or more.

Dull black, with some red and white on head and neck, PILEATED WOODPECKER.

Olive-brown, marked with black above; rump white; beneath beautifully spotted with black, FLICKER.

B. Length 10 inches or less.

a. Lustrous black; secondaries and upper tail coverts white; whole head crimson,

RED-HEADED WOODPECKER.

aa. Variegated black and white.

b. Yellowish on back and beneath; crown crimson,

YELLOW-BELLIED WOODPECKER.

bb. No yellowish tinge; little or no red on head.

c. Length 6 to 7 inches, DOWNY WOODPECKER.

cc. Length 9 to 10 inches,

Middle of back, white, Hairy WOODPECKER.

Middle of back, black, ARCTIC 3-TOED WOODPECKER.

5. Not one of the above four groups.

A. Breast and belly distinctly clear, unspotted white.

- a. Length 12 inches; upper parts iridescent olive-brown.
Much white on tail; bill yellow and black,

YELLOW-BILLED CUCKOO.

Little white on tail; bill bluish and black,

BLACK-BILLED CUCKOO.

- aa. Length 7 to 9 inches; upper parts not olive-brown.
Blackish-ash; tail broadly white tipped, KING BIRD.
Light slate color; wings and tail black with white
markings, LOGGERHEAD SHRIKE.

Various shades of brown and black; winter visitor,
SNOW BUNTING.

B. Breast and belly not entirely unspotted white.

- a. Blue a conspicuous color in the plumage.

Length 11 inches; black, white and blue, BLUE JAY.

Length 7 inches; blue above; chestnut on breast;
belly white, BLUEBIRD.

- aa. No conspicuous blue.

- b. Black or deep purple, in mass, a conspicuous part
of the coloration.

- c. Unicolor.

- d. Lustrous blue-black; length $7\frac{1}{2}$ inches, wing
nearly twice as long as tail,

MALE PURPLE MARTIN.

- dd. Iridescent black; length over a foot; tail
noticeably long and wedge-shaped.

Iridescence of head steel blue; of back brassy;
of wings violet, BRONZED GRACKLE.

Iridescence not specially defined in color or area,
PURPLE GRACKLE.

- ddd. Lustrous black; head brown; length $7\frac{1}{2}$
inches, MALE COW-BIRD.

- dddd. Black with green reflections; length
 9½ inches; in swamps during the migrations,
 MALE RUSTY BLACKBIRD.
- ddddd. Jet black; bend of wing scarlet,
 MALE RED-WINGED BLACKBIRD.
- cc. Black beneath, with buff and white above,
 MALE BOBOLINK.
- ccc. Black and some other color in mass, but with-
 out white (except sometimes in small amounts
 on wings and tail).
 Black and scarlet, MALE SCARLET TANAGER.
 Black and chestnut, MALE ORCHARD ORIOLE.
 Black and orange or yellow,
 BALTIMORE ORIOLE.
- cccc. Black, white and some other color.
 Black, white and chestnut, MALE CHEWINK.
 Black, white and rose-red,
 MALE ROSE-BREASTED GROSBEAK.
 Black, white and yellow,
 EVENING GROSBEAK.
- bb. No noticeable black in mass; red, rose or pink
 conspicuous.
- c. With noticeable red crest, CARDINAL BIRD.
- cc. No crest.
- d. Tips of mandibles crossed; length about 6 inches;
 winter or early spring visitors.
 Rosy-red; wing with two white bars,
 MALE WHITE-WINGED CROSSBILL.
 Brick-red; wing without white bars,
 MALE RED CROSSBILL.
- dd. Tips of mandibles not crossed.
 Length about 6 inches; summer resident,
 MALE PURPLE FINCH.

Length about $8\frac{1}{2}$ inches ; winter visitor,

MALE PINE GROSBEEK.

bbb. No black in mass, nor noticeable red, rose or pink.

c. Above brown, gray, olive or olive-green of some shade,—not evidently mottled or streaked.

d. Some or all of upper parts bright rufus, or tawny-brown.

Whole upper surface bright rufus ; length 11 inches, BROWN THRASHER.

Whole upper surface reddish-brown ; length $7\frac{1}{2}$ inches, WILSON'S THRUSH.

Tawny brown anteriorly shading into olivaceous behind ; length 8 inches, WOOD THRUSH.

Olivaceous anteriorly shading into rufus behind ; length 7 inches, HERMIT THRUSH.

dd. Entire upper parts rich warm brown ; sides chestnut ; belly white, FEMALE CHEWINK.

ddd. Upper parts, wholly or in large part, slate, ashy, gray, grayish-brown or olivaceous-brown of some shade.

e. Dark slate, overlaid with rusty-brown ; paler beneath, FEMALE RUSTY BLACKBIRD.

ee. Slate, ashy, gray, grayish-brown or olivaceous-brown, not overlaid with rusty.

f. Belly and two outer tail feathers wholly or in part, white.

Breast tawny-red, little white on tail, ROBIN.

Beneath white, finely transversely barred with black, BUTCHER-BIRD.

Throat and breast, slate, JUNCO.

ff. No white.

g. Crown black ; rump like back, CATBIRD.

gg. Crown and rump yellowish or reddish,

FEMALE PINE GROSBEEK.

- ggg. Head purplish and some purple gloss on back,
FEMALE PURPLE MARTIN.
- gggg. No purple or decided black.
Length 9 inches; belly yellow; tail chestnut, GREAT CRESTED FLYCATCHER.
Length 7 inches, no yellow or chestnut;
no greenish tinge or noticeable wing bars,
PHOEBE.
Length $6\frac{1}{2}$ inches, olivaceous; light bars on wings,
WOOD PEWEE.
- dddd. Upper parts olive or olive-green.
- e. Under parts more or less yellow, not spotted.
- f. Throat and breast golden yellow; belly abruptly white,
YELLOW-BREASTED CHAT.
- ff. No golden yellow and pure white in sharp contrast beneath.
Bill stout; colors clear; no white on wing,
FEMALE SCARLET TANAGER.
Bill slender; colors dull; white on wing,
FEMALE ORCHARD ORIOLE.
- ee. Under parts white, thickly spotted.
Crown golden-brown; length under $6\frac{1}{2}$ inches,
OVEN BIRD.
Crown olive, like back; length over $6\frac{1}{2}$ inches,
OLIVE-BACKED THRUSH.
- dddddd. Upper parts not tending towards rufous, gray, olivaceous-brown or olive.
- e. Length over a foot; no crest.
Upper parts slaty-blue; length 17 inches,
PASSENGER PIGEON.
Upper parts grayish blue shaded with brownish olive; length 12 inches,
MOURNING DOVE.
- ee. Length about 7 inches; with a crest,
CEDAR BIRD.

- cc. Plumage above evidently mottled or streaked.
- d. Prevailinglly bluish ; white beneath ; bill long ;
crest present, BELTED KINGFISHER.
- dd. Not at all bluish ; no crest.
- e. Very dark mottled, black, brown, gray and
tawny ; wings long ; nocturnal birds, roosting
on the ground or longitudinally on limbs, fence-
rails, etc.
Tail rounded ; no white spaces on wing,
WHIPPOORWILL.
Tail slightly forked ; large white spaces on
wing, NIGHTHAWK.
- ee. Prevailing tint brown, streaked with darker ; not
nocturnal.
- f. Length 10 inches ; stocky, ground loving birds.
Breast bright yellow with black crescent ; outer
tail feathers white, MEADOW LARK.
Breast not yellow ; no white tail feathers,
BOBWHITE.
- ff. Length 6-8½ inches ; not stocky.
- g. Terrestrial birds with outer tail feathers white.
Upper parts pale grayish-brown distinctly
streaked ; wings and tail not very dark ;
bend of wing bright bay, in contrast to
other parts, VESPER SPARROW.
Upper parts dark brown, obscurely streaked ;
wings and tail blackish ; bend of wing not
contrasted with other parts, TITLARK.
- gg. Meadow and swamp birds ; outer tail feathers
not white ; walkers, not hoppers.
Brown, heavily streaked with paler ; beneath
whitish with numerous dark streaks ; tail
feathers soft and rounded at end,
FEMALE RED-WINGED BLACKBIRD.

Dusky grayish-brown, paler below ; no white,
yellow or reddish,

FEMALE COWBIRD.

Distinctly yellowish, especially beneath ; tail
feathers rigid and very acute,

FEMALE BOBOLINK.

ggg. Birds of trees, shrubbery, fence-rows and
the street ; no white on tail ; hoppers.

h. Crown with conspicuous median and lateral
stripes of pure white.

Throat white ; yellow on head and wing,

WHITE-THROATED SPARROW.

Throat ash ; no yellow,

WHITE-CROWNED SPARROW.

hh. Crown without white stripes.

i. Length 7 inches ; bright rusty-red above,

FOX SPARROW.

ii. Not bright rusty-red above.

j. Underneath dingy ashy-white without
streaks,

ENGLISH SPARROW.

jj. Under parts streaked.

k. Winter or early spring visitors ; tips of
mandibles crossed.

Wings with two white bars,

FEMALE WHITE-WINGED CROSSBILL.

Wings without white bars,

FEMALE RED CROSSBILL.

kk. Summer visitors ; tips of mandibles
not crossed.

Length about 8 inches ; lining of
wings saffron yellow,

FEMALE ROSE-BREASTED GROSBEAK.

Length about 6 inches ; lining of
wings not saffron-yellow,

FEMALE PURPLE FINCH.

Group III. Small Birds.

1. Wings very long, 70 to 100 per cent. of total length; bill and feet small and weak; usually seen flying but sometimes on the ground or perched on wires.
 - A. Uniform sooty-brown, or brownish-gray; no white.

Wings as long as body, which ordinarily appears tapered towards each end; flight very rapid; never perch, CHIMNEY SWIFT.

Wings only 80 per cent of body: flight not notably swift; very rare indeed, ROUGH-WINGED SWALLOW.
 - B. Not uniform sooty-brown.
 - a. Under parts white.

Large; tail slightly forked; back iridescent green or blue, WHITE-BELLIED SWALLOW.

Small; tail not forked; back mouse-brown, BANK SWALLOW.
 - aa. Under parts more or less rufous.

Tail deeply forked; rump like back, BARN SWALLOW.

Tail not forked; rump rufous in contrast to back, EAVE SWALLOW.
2. Wings less than 70 per cent. of total length.
 - A. Underparts uniform white, whitish creamy or ashy, without streaks, spots or wavy transverse lines and with no decided yellow or black on chin, throat or breast.
 - a. Back streaked with various dark and light shades.
 - b. Crown streaked like back; active tree climber, BROWN CREEPER.
 - bb. Crown chestnut, not like back; not tree climbers.

Wings almost uniform bright bay; shy swamp bird, hard to find, SWAMP SPARROW.

Wings dusky; general tint ashy; bill black;
familiar bird of gardens, lawns, roadsides, etc.,

CHIPPING SPARROW.

Wings dusky; general tint brownish; bill flesh
color; bird of fields and roadsides,

FIELD SPARROW.

aa. Back more or less olivaceous or brownish, not
streaked at all.

b. Head with a small but evident crest; erect, impul-
sive, somewhat erratic, little flycatchers.

Length over $5\frac{1}{2}$ inches; eggs spotted; not very
common nor usually seen near houses,

TRAILL'S FLYCATCHER.

Length under $5\frac{1}{2}$ inches; eggs unspotted; com-
mon in orchards and gardens,

LEAST FLYCATCHER.

bb. No crest evident; active insect hunters, but not
noticeably impulsive or erratic.

c. Size small, under $4\frac{1}{2}$ inches; winter visitors or
migrants.

Crown black, bordered with white, with yellow
or flame-colored patch at center,

GOLDEN-CROWNED KINGLET.

Crown never black; sometimes with ruby-red
patch at center,

RUBY-CROWNED KINGLET.

cc. Size larger over 5 inches. Summer residents or
visitors.

Head buff with four longitudinal black stripes,
one on each side through eye and two on
crown,

WORM-EATING WARBLER.

Crown ash, edged with black; white stripe
over eye,

RED-EYED VIREO.

Crown bluish-ash; no black; broad white
stripe, nostril to eye,

SOLITARY VIREO.

- Crown olive-green like back ; sides and under tail coverts yellow, WHITE-EYED VIREO.
 No distinctive markings, WARBLING VIREO.
- aaa. Back bright ashy-blue ; crown glossy black ; tree climber, WHITE-BREASTED NUTHATCH.
- B. Underparts not as above.
- a. Back, breast and sides (and often other parts) distinctly streaked with various shades of black, brown and lighter colors.
- b. Length scarcely 5 inches ; plumage with evident yellow tinge.
 Tail feathers very acute ; secretive meadow bird, in summer, HENSLOW'S SPARROW.
 Tail feathers not acute ; active bird of trees and shrubs : in winter, PINE FINCH.
- bb. Length more than 5 inches ; plumage without decided yellow tinge.
- c. Crown crimson ; face and throat blackish ; winter visitor, LESSER RED-POLL.
- cc. No crimson ; summer residents.
- d. Dark brown ; streaking thick ; bend of wing and line over eye yellow, SAVANNAH SPARROW.
- dd. Bright brown ; streaking not so thick ; no yellow.
 Breast, though streaked, with a broad transverse cream-buff band, LINCOLN'S SPARROW.
 Breast with no such band but often with a distinct central brown blotch, SONG SPARROW.
- aa. Back, breast and sides not as above.
- b. General cast of plumage brown, palest beneath, everywhere waved or crossbarred with dusky ; small, active birds.
 Length about 5 inches ; no white ; summer resident, HOUSE WREN.

- Length about 4 inches ; some white on back and wings ; migrant, WINTER WREN.
- bb. General cast of plumage not as above.
- c. Upper parts uniform dark olive ; walkers and wagtails.
Lower parts clearly tinged with sulphur-yellow, sharply streaked, WATER THRUSH.
Lower parts tinged with buff, rather indistinctly streaked, LOUISIANA WATER THRUSH.
- cc. Upper parts not uniform dark olive ; hoppers ; usually not wagtails.
- d. No yellow.
- e. Black and white only.
Cap solid black, MALE BLACK-POLL WARBLER.
Cap with a white stripe through middle, BLACK AND WHITE WARBLER.
- ee. Not simply black and white.
- f. General color more or less bright blue.
Above sky-blue, beneath white, streaked on breast, MALE CAERULEAN WARBLER.
Indigo-blue ; no white, MALE INDIGO-BIRD.
- ff. General color not largely bright blue.
Grayish, black-capped and black-throated, CHICKADEE.
Metallic green above ; length about 3 inches, RUBY-THROATED HUMMING-BIRD.
Pale warm brown, lightest beneath ; lower mandible white, FEMALE INDIGO-BIRD.
Grayish-blue above, rusty reddish beneath, RED-BREASTED NUTHATCH.

Back streaked with black, bay and flaxen ;
 breast ashy with a distinct dusky spot at
 center, TREE SPARROW.

Back mixed black and olive ; crown, chin
 and throat more or less chestnut,

BAY-BREADED WARBLER.

Black ; belly white ; sides and much of wings
 and tail flame-red, MALE REDSTART.

dd. With more or less yellow.

e. With a slight crest ; bill broad and flat ; olive
 green above ; under parts yellow, brightest on
 the belly, YELLOW-BELLIED FLYCATCHER.

ee. No crest.

f. Bill not flat ; belly white ; throat bright yellow,
 YELLOW-THROATED VIREO.

ff. Bill short and thick ; lemon yellow with cap,
 wings and tail black ; or olivaceous above,
 soiled yellowish beneath, GOLDFINCH.

fff. Bill neither notably flat, nor short and thick,
 usually rather slender.

g. Chin and throat bright yellow or even orange.

h. With conspicuous black markings.

i. Crown black.

j. Ear-patch orange-brown ; breast and sides
 thickly streaked,

MALE CAPE MAY WARBLER.

jj. No conspicuous ear-patch.

Upper parts yellowish-olive ; beneath
 unstreaked, MALE WILSON'S WARBLER.

Upper parts mainly black ; spot on
 crown, line over eye, chin and throat
 intense orange,

MALE BLACKBURNIAN WARBLER.

- ii. Crown not black.
Cheeks more or less black, which is continued as streaks, like a necklace along the sides of neck and across throat,
CANADIAN WARBLER.
Forehead and sides of head black, bordered posteriorly with ashy; no black beneath,
MALE MARYLAND YELLOW THROAT.
Crown ash; sides of head black; rump yellow, breast and sides heavily streaked with black,
MAGNOLIA WARBLER.
- hh. No conspicuous black markings.
 - i. Upper parts ashy-blue with a patch of greenish or brownish-yellow in middle of back; two white bars on wing; some white on tail; belly white,
PARULA WARBLER.
 - ii. Upper parts olive green, greenish-yellow or bright yellow, without sharp contrasts.
 - j. Whole head golden yellow.
Bill large, $\frac{1}{2}$ inch long; tail feathers with much white,
PROTHONOTARY WARBLER.
Bill not large; no white on tail,
YELLOW WARBLER.
 - jj. Yellow of throat contrasted with the color of head.
Head ashy; no white on wings or tail; length $4\frac{1}{2}$ inches,
NASHVILLE WARBLER.
Crown chestnut; beneath with brownish red streaks; conspicuous white spots on tail,
YELLOW RED-POLL WARBLER.
No noticeable contrasts in color; wing bars and blotches on tail, white
MALE PINE WARBLER.

Bright yellowish-olive above; rich yellow
beneath; no white; no streaks or marks,

FEMALE WILSON'S WARBLER.

Rich olive above, grayer on head; rich
yellow beneath, becoming whitish on belly,

FEMALE MARYLAND YELLOW-THROAT.

Brownish-olive above streaked with black;
two white bars on wing and much white
on tail, FEMALE BLACKBURNIAN WARBLER.

Yellowish-olive above spotted with black; a
little white on wings and tail; breast and
sides streaked with blackish,

FEMALE CAPE MAY WARBLER.

gg. Chin and throat not bright yellow.

h. Chin and throat wholly or largely black, often
more or less veiled with yellowish or ashy.

i. Upper parts yellow-olive or bright yellow.

Much white on wings and tail,

BLACK-THROATED GREEN WARBLER.

No white on wings and tail,

MALE MOURNING WARBLER.

ii. Upper parts slaty-blue.

Patch on wing white,

MALE BLACK-THROATED BLUE WARBLER,

Patch on wing, and crown, yellow,

GOLDEN-WINGED WARBLER.

hh. Chin and throat pure white.

Crown gray; much yellow on wings and
tail, FEMALE REDSTART.

Crown yellow; sides chestnut,

CHESTNUT-SIDED WARBLER.

Center of crown, rump and sides of breast
yellow; breast and sides mostly black,

MYRTLE WARBLER.

hhh. Chin and throat ashy.

Tail much shorter than wing; some white
around eye, CONNECTICUT WARBLER.

Tail long, as long as wing; no white
around eye,

FEMALE MOURNING WARBLER.

hhhh. Chin and throat like rest of under parts,
dingy yellowish or whitish.

i. No white bars, but a white patch on wing;
length about 5 inches,

FEMALE BLACK-THROATED BLUE WARBLER.

ii. Two white bars on wing.

j. Length 4 to $4\frac{1}{2}$ inches; white spots on 5
outer tail feathers,

FEMALE CAERULEAN WARBLER.

jj. Length over 5 inches; white spots on 2
outer tail feathers.

Not streaked beneath,

FEMALE PINE WARBLER.

Evidently streaked beneath,

FEMALE BLACK-POLL WARBLER.

AN ARTIFICIAL KEY

To the Birds of Amherst, to be used when the specimen is actually in hand.

Toes 3, all in front. Group I.

Toes 4, 2 in front and 2 behind. Group II.

Toes 4, 3 in front and 1 behind. Group III.

Group I. Three-toed Birds.

- A. Feet fully webbed, DOVEKIE.
- B. Feet not webbed.
 - a. All 3 toes in front.
 - Bill black ; length of bird 9-10 inches, KILDEER.
 - Bill yellow with black tip ; length 7 inches, PIPING PLOVER.
 - aa. Two toes in front and one behind, ARCTIC THREE-TOED WOODPECKER.

Group II. Four-toed Birds, the toes in pairs.

- A. Tail feathers rounded.
 - Bill black and bluish, BLACK-BILLED CUCKOO.
 - Bill black and yellow, YELLOW-BILLED CUCKOO.
- B. Tail feathers sharply pointed.
 - a. Length a foot or more.
 - Length 16-18 inches ; lining of wings white, PILEATED WOODPECKER.
 - Length 12-13 inches ; lining of wings golden, FLICKER.

- aa. Length 10 inches or less.
- b. Crown or whole head red.
 - Only the crown red,
 - YELLOW-BELLIED WOODPECKER.
 - Whole head red,
 - RED-HEADED WOODPECKER.
- bb. Little or no red on head.
 - Length 9-10 inches,
 - HAIRY WOODPECKER.
 - Length 6-7 inches,
 - DOWNY WOODPECKER.

Group III. Four-toed Birds, the toes not in pairs.

- 1. Front toes fully webbed.
 - A. Edges of mandibles with teeth-like projections.
 - a. Length over 36 inches,
 - CANADA GOOSE.
 - aa. Length under 31 inches.
 - b. Bill broad and flattened.
 - c. Bill twice as wide at tip as at base,
 - SHOVELLER DUCK.
 - cc. Bill not as above.
 - d. Length over 18 inches.
 - e. Tail rounded.
 - Length 26-28 inches,
 - BRANT.
 - Length 22-24 inches,
 - DUSKY DUCK.
 - Length 18-20 inches,
 - WOOD DUCK.
 - ee. Tail not rounded,
 - PIN-TAIL DUCK.
 - dd. Length under 16 inches.
 - Wing coverts sky-blue,
 - BLUE-WINGED TEAL.
 - Wing coverts not blue,
 - GREEN-WINGED TEAL.
 - bb. Bill narrow, nearly cylindrical.
 - c. Head with large, more or less semi-circular crest,
 - HOODED MERGANSER.
 - cc. No such crest.
 - Nostrils near middle of bill,
 - COMMON MERGANSER.

Nostrils near base of bill,

RED-BREADED MERGANSER.

B. Edges of mandibles smooth.

Length 30-36 inches,

LOON.

Length 24 inches,

HERRING GULL.

2. Front toes not webbed but edged with wide flaps.

A. Forehead protected by a broad, horny shield, COOT.

B. No such shield.

Length 19 inches,

HOLBOELL'S GREBE.

Length 13 inches,

COMMON GREBE.

3. Toes neither webbed nor edged with wide flaps.

A. Tibiae naked below.

a. Outer and middle toe grown together for most of length, BELTED KINGFISHER.

aa. Toes not so united.

b. Size large; length 16 inches or over.

c. Color pure white.

Length 24 inches,

SNOWY HERON.

Length 36-42 inches,

AMERICAN EGRET.

cc. Color not white.

d. Tail feathers 10,

BITTERN.

dd. Tail feathers 12.

e. Length 42 inches or more, GREAT BLUE HERON.

ee. Length 26 inches or less.

f. Length 23-26 inches,

NIGHT HERON.

ff. Length 16-18 inches,

Bill much under 3 inches,

GREEN HERON.

Bill much over 3 inches, HUDSONIAN CURLEW.

bb. Size small; length under 15 inches.

c. Tail feathers 10,

LEAST BITTERN.

cc. Tail feathers 12 or more.

d. Length 7 inches or less.

Beneath brownish-yellow,

YELLOW RAIL.

Beneath white,

LEAST SANDPIPER.

dd. Length $7\frac{1}{2}$ inches or more.

e. Legs bright yellow, YELLOW-LEGS.

ee. Legs not bright yellow.

f. Beneath white, with or without spots.

g. Thickly spotted, SPOTTED SANDPIPER.

gg. Not spotted; fore breast dusky.

Length about 12 inches, UPLAND PLOVER.

Length 8-9 inches, SOLITARY SANDPIPER.

ff. Beneath not white.

Bill much over 2 inches, CLAPPER RAIL.

Bill less than 2 inches but much over an
inch, VIRGINIA RAIL.

Bill much less than an inch,

CAROLINA RAIL.

B. Tibiae feathered to tarsal joint or very nearly so.

a. Tarsus fully feathered.

b. Eyes large, directly in front.

c. Ear-tufts, present.

d. Length less than a foot, SCREECH OWL.

dd. Length 14-18 inches.

Ear tufts conspicuous, LONG-EARED OWL.

Ear tufts small, SHORT-EARED OWL.

ddd. Length over 20 inches, GREAT HORNED OWL.

cc. Ear tufts practically wanting.

d. Tail graduated, HAWK OWL.

dd. Tail not graduated.

Length 27 inches, GREAT GRAY OWL.

Length 24 inches, SNOWY OWL.

Length 6-8 inches, SAW-WHET OWL.

bb. Eyes moderate, on sides of head.

Length less than 24 inches,

ROUGH-LEGGED HAWK.

Length over 30 inches, GOLDEN EAGLE.

- aa. Tarsus never fully feathered.
- b. Eye above and back of ear.
Three outer primaries abruptly narrowed,
WOODCOCK.
Outer primaries not narrowed, WILSON'S SNIBE.
- bb. Eye in front of ear.
- c. Bill hooked; base covered with a thick skin.
- d. Tarsus covered with plates in front and behind.
- e. Rump pure white, MARSH HAWK.
- ee. Rump not white.
- f. Length 17 inches or less, BROAD-WINGED HAWK.
- ff. Length 18 inches or over.
Wing coverts more or less rufous,
RED-SHOULDERED HAWK.
Wing coverts without rufous,
RED-TAILED HAWK.
- dd. Tarsus with plates only in front, or "booted" (i. e. with the front scales fused into a single smooth plate.)
- e. Length over 30 inches, BALD EAGLE.
- ee. Length under 25 inches.
- f. Length over 20 inches, GOSHAWK.
- ff. Length under 20 inches.
Length 16-18 inches, COOPER'S HAWK.
Length 12-14 inches, SHARP-SHINNED HAWK.
- ddd. Tarsus without plates.
- e. Bill not notched or toothed, FISH HAWK.
- ee. Bill notched or toothed.
Length over 21 inches, GYRFALCON.
Length 16-19 inches, DUCK HAWK.
Length 10-12 inches; back not chestnut,
PIGEON HAWK.
Length 10 inches; back chestnut,
SPARROW HAWK.

- cc. Bill not as above, but with the nostrils opening
beneath a soft swollen membrane.
Tail of 12 feathers, PASSENGER PIGEON.
Tail of 14 feathers, MOURNING DOVE.
- ccc. Bill and nostrils not as above.
- d. Hind toe elevated above the front ones.
- e. Gape of mouth not reaching below eye.
Tail of 18 feathers, RUFFED GROUSE.
Tail of 12 feathers, BOBWHITE.
- ee. Gape of mouth reaching below eye.
- f. Length over 8 inches.
Tail rounded, WHIPPOORWILL.
Tail slightly forked, NIGHT HAWK.
- ff. Length under 6 inches.
Length 5 inches, CHIMNEY SWIFT.
Length 3 inches,
RUBY-THROATED HUMMING-BIRD.
- dd. Hind toe not elevated.
- e. Primaries 10, outermost at least two-thirds as
long as longest.
- f. Length over 8 inches.
Pure white beneath, KING-BIRD.
Not white beneath,
GREAT CRESTED FLYCATCHER.
- ff. Length 7 inches or less.
- g. Length over $6\frac{1}{2}$ inches.
Bill wholly black, PHOEBE.
Lower mandible not black, WOOD PEWEE.
- gg. Length 6 inches or less.
- h. Throat yellow, YELLOW-BELLIED FLYCATCHER.
- hh. Throat white.
Length 6 inches, TRAILL'S FLYCATCHER.
Length $5\frac{1}{2}$ inches, LEAST FLYCATCHER.

ee. Primaries 9 or 10; if 10, outermost not two-thirds as long as longest.

The great group of song-birds belongs under this head; for convenience we will divide it into two sections: those species in which the front of the tarsus is covered by a number of scales or long plates, and those in which these plates are fused into a single sheath, a condition in which the tarsus is said to be "booted."

Section I. Tarsus not booted.

1. Bill strongly hooked, and notched.

A. Length over 8 inches.

Beneath pure white,

LOGGERHEAD SHRIKE.

Beneath white, with numerous fine transverse black lines,

BUTCHER-BIRD.

B. Length under 7 inches.

a. Throat bright yellow,

YELLOW-THROATED VIREO.

aa. Throat not yellow.

b. Two white or yellow bars on wing,

Iris brown; head ashy with no yellow,

SOLITARY VIREO.

Iris white; head olive green with yellow.

WHITE-EYED VIREO.

bb. No bars on wing.

Iris red; crown black-edged,

RED-EYED VIREO.

Iris brown; crown without black.

WARBLING VIREO.

2. Bill not strongly hooked and notched, but nearly as broad at base as long and with mouth extending under eyes.

A. Plain brown above,

A tuft of feathers at base of toes, BANK SWALLOW.

No such tuft,

ROUGH-WINGED SWALLOW.

B. Not plain brown above.

a. Forehead same color as crown.

Green above ; white beneath,

WHITE-BELLIED SWALLOW.

No green or white,

PURPLE MARTIN.

aa. Forehead not same color as crown.

Tail deeply forked,

BARN SWALLOW.

Tail almost square cut,

EAVE SWALLOW.

3. Bill not as above, but with tips of mandibles crossed.

Two white bars on wing,

WHITE-WINGED CROSSBILL.

No bars on wings,

RED CROSSBILL.

4. Bill not as above, but with a distinct sharp lobe or tooth near middle of edge of upper mandible,

SCARLET TANAGER.

5. Bill not as above, but much shorter than head and with corners of mouth sharply drawn down.

A. Tail feathers sharply pointed ; length over $6\frac{1}{2}$ inches,

BOBOLINK.

B. Tail feathers not sharply pointed if bird is over 6 inches.

a. Bill black.

b. Crown rufous, reddish or yellowish.

Length over 8 inches,

PINE GROSBEAK.

Length under 6 inches,

CHIPPING SPARROW.

bb. Crown not rufous, reddish or yellowish.

Belly white ; sides chestnut,

CHEWINK.

No white or chestnut,

COWBIRD.

aa. Bill not wholly black.

b. Length over 7 inches.

c. Bill very large and light-colored.

Breast rose-red ; or else under wing coverts saffron-yellow,

ROSE-BREADED GROSBEAK.

Breast not rose-red ; under wing coverts not saffron-yellow,

EVENING GROSBEAK.

- cc. Bill not as above.
 - d. With a prominent crest, CARDINAL BIRD.
 - dd. No crest.
 - Colors chiefly black, white and brown, SNOW BUNTING.
 - Colors not as above, FOX SPARROW.
- bb. Length under 7 inches.
 - c. Nowhere decidedly streaked or spotted.
 - Slate-colored; belly white, JUNCO.
 - More or less blue, MALE INDIGO-BIRD.
 - More or less yellow, GOLDFINCH.
 - cc. Streaked or spotted somewhere.
 - d. Lower mandible white with black stripe along middle, FEMALE INDIGO-BIRD.
 - dd. Lower mandible not as above.
 - e. Outer tail feathers largely white, VESPER SPARROW.
 - ee. Not as above.
 - f. Wings much longer than tail.
 - g. With crimson or clear red.
 - Nearly whole bird crimson, MALE PURPLE FINCH.
 - Only crown and throat crimson, LESSER RED-POLL.
 - gg. With no red.
 - h. With yellow.
 - Tail yellow at base, PINE FINCH.
 - Tail not yellow at base, SAVANNAH SPARROW.
 - hh. With no yellow.
 - Not streaked beneath, ENGLISH SPARROW.
 - Much streaked beneath, FEMALE PURPLE FINCH.
 - ff. Wings little if any longer than tail.
 - g. Sharply streaked beneath.
 - No buff or yellow, SONG SPARROW.

Under parts with buff ; yellow on wing,
 HENSLOW'S SPARROW.

Under parts with buff ; no yellow,
 LINCOLN'S SPARROW.

gg. Not streaked beneath.

h. Crown without white.

i. Tail rounded, SWAMP SPARROW.

ii. Tail slightly forked.

Bill pale reddish, FIELD SPARROW.

Bill black and yellow, TREE SPARROW.

hh. Crown with white stripes.

Throat white ; yellow line from bill to eye,
 WHITE-THROATED SPARROW.

Throat ash ; no yellow,
 WHITE-CROWNED SPARROW.

6. Bill not as above ; as long as head or longer and with corners of mouth sharply drawn down.

A. Underparts with yellow or bright chestnut.

a. Black crescent on breast ; tail feathers acute,
 MEADOW LARK.

aa. Not as above.

Rump more or less orange, BALTIMORE ORIOLE.

Rump not orange, ORCHARD ORIOLE.

B. Under parts without yellow or chestnut.

a. Length a foot or more.

Iridescence not in distinct areas, PURPLE GRACKLE.

Iridescence in distinct areas, BRONZED GRACKLE.

aa. Length 10 inches or less.

Bend of wing scarlet or else under parts streaked with dark brown and white,

RED-WINGED BLACKBIRD.

Not as above, RUSTY BLACKBIRD.

7. Bill not as above.

A. Length over 7 inches.

- a. Conspicuously crested.
 - Color largely blue, BLUE JAY.
 - No blue at all, CEDAR BIRD.
- aa. No crest.
 - b. Length 2 feet or more ; black RAVEN.
 - bb. Length under 20 but over 16 inches ; black, CROW.
 - bbb. Length under 14 inches ; not black.
 - c. Breast bright yellow, YELLOW-BREASTED CHAT.
 - cc. Breast not yellow.
 - Bright ferruginous above, BROWN THRASHER.
 - Slate color, CAT BIRD.
- B. Length under $6\frac{3}{4}$ inches.
 - a. Nostrils covered by a tuft of bristly feathers.
 - Throat black, CHICKADEE.
 - Throat rusty-red, RED-BREASTED NUTHATCH.
 - Throat white, WHITE-BREASTED NUTHATCH.
 - aa. Nostrils not as above ; tail feathers rigid and sharp pointed like a woodpeckers, BROWN CREEPER.
 - aaa. Nostrils and tail feathers not as above.
 - b. Color chiefly brown, more or less waved with darker ; wings and tail barred.
 - Length over $4\frac{1}{2}$ inches ; wings equal to tail, HOUSE WREN.
 - Length under $4\frac{1}{2}$ inches ; wings much longer than tail, WINTER WREN.
 - bb. Color not as above.
 - c. Bill conical, slender ; bristles at base short or wanting.
 - d. Length $5\frac{1}{2}$ inches or more ; tail feathers without white.
 - e. Crown golden-brown, OVEN BIRD.
 - ee. Crown not golden-brown.
 - f. Not spotted beneath, WORM-EATING WARBLER.

ff. Spotted beneath.

Tinged with buff beneath; legs pale,

LOUISIANA WATER THRUSH.

Tinged with sulphur-yellow beneath; legs
dark,

WATER THRUSH.

dd. Length over 6 inches; hind claw almost straight,
nearly twice as long as middle claw, TITLARK.

ddd. Length usually under $5\frac{1}{2}$ inches; if over that,
outer tail feathers conspicuously marked with
white.

e. Tail feathers without white blotches.

f. Throat yellow.

g. Tail nearly equal to wing,

MARYLAND YELLOW-THROAT.

gg. Tail much shorter than wing.

Whole head yellow, YELLOW WARBLER.

Whole head not yellow,

NASHVILLE WARBLER.

ff. Throat not yellow.

A white ring around eye,

CONNECTICUT WARBLER.

No white eye-ring, MOURNING WARBLER.

ee. Tail feathers with white blotches.

f. Tarsus shorter than middle toe and claw,

BLACK AND WHITE WARBLER.

ff. Tarsus not shorter than middle toe and claw.

g. Rictal bristles nearly wanting

Entire fore-parts golden yellow,

PROTHONOTARY WARBLER.

Fore-parts not wholly yellow,

GOLDEN-WINGED WARBLER.

gg. Rictal bristles evident.

h. Back blue, with a central yellowish patch,

PARULA WARBLER.

- hh. Back not so colored.
- i. Wing bars not white.
 - Beneath white, CHESTNUT-SIDED WARBLER.
 - Beneath yellow,
 - YELLOW RED-POLL WARBLER.
- ii. Wing bars, if present, white.
 - j. Large white spot at base of primaries,
 - BLACK-THROATED BLUE WARBLER.
 - jj. No such spot.
 - k. Rump yellow.
 - l. White spots near middle of tail feathers,
 - MAGNOLIA WARBLER.
 - ll. White spots near ends of tail feathers.
 - Beneath white streaked with black,
 - MYRTLE WARBLER.
 - Beneath yellow streaked with black,
 - CAPE MAY WARBLER.
 - kk. Rump not yellow.
 - l. White spots at ends of 5 pairs of tail feathers,
 - CAERULEAN WARBLER.
 - ll. White on tail not so distributed.
 - m. Outer tail feather edged with white externally.
 - Throat black or blackish,
 - BLACK-THROATED GREEN WARBLER.
 - Throat orange or yellow,
 - BLACKBURNIAN WARBLER.
 - mm. Outer tail feather not edged with white.
 - n. Large white spots at ends of only 2 outer tail feathers.
 - PINE WARBLER.
 - nn. White spots small, at ends of 2 or more outer tail feathers.
 - Bay or buffish on breast; belly white, BAY-BREASTED WARBLER.

Not as above,

BLACK-POLL WARBLER:

cc. Bill broad, flattened ; bristles at base reaching far beyond nostrils.

d. Black, white and flame-red, or brown, white and yellow, REDSTART.

dd. Not as above.

Olive-green and yellow, WILSON'S WARBLER.

Ashy and yellow, CANADIAN WARBLER.

Section II. Tarsus booted.

1. Length 5 inches or less.

Crown with a patch of orange or yellow,

GOLDEN-CROWNED KINGLET.

Crown with a patch of ruby red or none.

RUBY-CROWNED KINGLET.

2. Length 7 inches or more.

A. Breast white more or less tinged with buff and often spotted

a. Tail same color as back.

Upper parts cinnamon-brown, WILSON'S THRUSH.

Upper parts olive, OLIVE-BACKED THRUSH.

aa. Tail different from back.

Tail brownish olive, WOOD THRUSH.

Tail bright rufous, HERMIT THRUSH.

B. Breast not as above.

Back bright blue, BLUE BIRD.

No blue, ROBIN.

The Birds of Amherst.

1. *Colymbus holboellii* (Reinh.).

HOLBOELL'S GREBE. RED-NECKED GREBE.

Above, blackish or brownish, the feathers edged with grayish; sides of neck, brownish-gray; beneath, silky-white. Length, 19 inches.

Two specimens of this rare bird have been taken at Belchertown ponds; one about 1871, the other in March, 1886. The latter is in the collection of Mr. Stone, Enfield.

2. *Podilymbus podiceps* (Linn.).

COMMON GREBE. DIPPER DUCK.

Above, dark brownish, the feathers with paler edges; beneath, silky-white. Length, 13 inches.

Not uncommon in Adam's and Hadley ponds and the Connecticut river. Very possibly breeds.

3. *Urinator imber* (Gunn.).

LOON. GREAT NORTHERN DIVER.

Above, black marked with white on the back; beneath, white. Length, 32-35 inches.

An irregular and rare visitant during the migrations.

4. *Alle alle* (Linn.).

DOVEKIE.

Above, blue-black; beneath, pure white. Length, 8-9 inches.

Belchertown ponds, winter of 1872; many were blown inland by a severe storm. Entirely accidental.

5. *Larus argentatus smithsonianus* Coues.

AMERICAN HERRING GULL.

Gull blue; part of wings, black. Length, 24 inches.

Has occurred at rare intervals at Belchertown ponds.

6. *Merganser americanus* (Cass.).

COMMON MERGANSER. GOOSANDER.

MALE: Head and neck, dark green; upper parts, mostly black; surface of wing, white.

FEMALE: Head and neck, reddish-brown; black of male replaced by ashy-gray. Both sexes, more or less salmon tinted beneath. Length, 24-27 inches.

Not uncommon on the Connecticut river during the migrations.

7. *Merganser serrator* (Linn.).

RED-BREASTED MERGANSER.

MALE: Head and neck, dark green; above, black and gray; breast, brownish-red; belly, salmon-white.

FEMALE: Head and neck, grayish-chestnut; above, gray; beneath, white. Length, 22-24 inches.

Taken once on the Connecticut near Northampton.

8. *Lophodytes cucullatus* (Linn.).

HOODED MERGANSER.

MALE: Above, black; center of crest, white; beneath, white; sides, waved with brownish.

FEMALE: Head and neck, grayish-chestnut; back and sides, dusky brown. Length, 16-18 inches.

Not rare on the Connecticut river, during the migrations.

9. *Anas obscura* Gmel.

DUSKY DUCK. BLACK DUCK.

Dusky-brown; spot on bend of wing, purple; iris brown. Length, 22 inches.

Formerly abundant but now rather rare. Occasionally seen from the last of March until the middle of May and again in

October and November. Feeds on vegetable matter, mollusks, worms and insects.

10. *Anas carolinensis* Gmel.

GREEN-WINGED TEAL.

MALE: Head, chestnut; upper parts and sides, waved with black and white; beneath, whitish, spotted on breast with black; under tail coverts, black.

FEMALE: Head and neck, brown streaked with reddish; above, mottled with dark brown, barred and streaked with tawny or grayish. Length, 14 inches.

Occasional on the Connecticut river and on the ponds about Amherst, during the migrations.

11. *Anas discors* Linn.

BLUE-WINGED TEAL.

MALE: Above, various shades of brown; head, dark leaden-gray; beneath, purplish-gray, thickly spotted with black.

FEMALE: Above, dark brown, edges of feathers, paler; head, buff streaked with blackish; beneath, whitish-gray, obscurely spotted. Length, 15-16 inches.

Not rare on the Connecticut and occasional on the ponds about Amherst, during the migrations.

12. *Spatula clypeata* (Linn.).

SHOVELLER DUCK.

Head and neck, dark green in the male, brownish-yellow streaked with dusky in the female; breast, white; belly, more or less purplish-chestnut; rump, upper and under tail-coverts, black; wing-coverts, sky-blue, Length, 17-21 inches.

Has been taken a few times on the Connecticut river.

13. *Dafila acuta* (Linn.).

PIN-TAIL DUCK.

MALE: Head and neck, rich dark brown; above, waved or striped with black and whitish; beneath, white,

FEMALE: Head and neck, buffy; almost white beneath, streaked above and on sides with blackish; above, fuscous marked with buffy or whitish; beneath, whitish, spotted on the breast; Length, 22-30 inches.

Reported only once; the Connecticut river near Northampton.

14. *Aix sponsa* (Linn.).

WOOD DUCK. SUMMER DUCK.

MALE: Crown, glistening green and purple; patch on throat, white; beneath, white except throat and breast which are rich chestnut spotted with white; back, bronzy-green, purple and velvety-black, mingled with white; feet, orange; iris, red.

FEMALE: Head and neck, gray; throat and breast, yellowish-brown mottled with gray or spotted with brown; back, dark brown; feet, yellowish-dusky. Length, 18-20 inches.

Common migrant but rare breeder, and becoming more rare. Earliest arrival, April 9; departs in October. Raises one brood. Eggs, 10-12, pale drab. Nest of feathers, etc., in a hollow tree. Feeds on vegetable matter, mollusks, worms and insects. Deserves most careful protection.

15. *Branta canadensis* (Linn.).

CANADA GOOSE. WILD GOOSE.

Bill, feet, head and neck, black; chin and sides of head, white; above, brownish-gray; beneath, paler. Length, 36-38 inches.

Common in spring and fall, flying over. Earliest arrival March 10; in the fall, usually seen in November. Occasionally taken on the Connecticut and on the ponds around Amherst. Note, a loud "honk."

16. *Branta bernicla* (Linn.).

BRANT.

Head, neck, throat and upper breast, black; sides of neck, speckled with white; back, brownish-gray; lower breast, ashy-gray; belly, white. Length, 26 inches.

Accidental visitor. One taken near Northampton, April 11, 1903 (*fide* Morris).

17. *Botaurus lentiginosus* (Montag.).

BITTERN. STAKE-DRIVER.

Everywhere varied with brownish tawny, white and black; a black patch on side of neck. Length, 2-3 feet.

Not common, but a regular summer visitor; formerly bred

and probably does still. Frequents wet meadows and the borders of ponds. Feeds on frogs, mollusks, insects, etc. Note resembles the sound made by driving a stake into soft ground with a mallet.

18. *Ardetta exilis* (Gmel.).

LEAST BITTERN.

Crown, back and tail, greenish-black in male, purplish-chestnut in female; back of neck and most of wing coverts, chestnut; beneath, brownish-yellow. Length, 11-14 inches.

Apparently very rare. Only specimen reported was taken near Northampton.

19. *Ardea herodias* Linn.

GREAT BLUE HERON.

Above, slaty-blue; beneath, black and white or ashy (young); tibia and edge of wing, chestnut. Length, 42-50 inches.

Rare and of irregular occurrence. Most of the specimens taken have been in late summer, in the young plumage.

20. *Ardea egretta* Gmel.

AMERICAN EGRET.

Pure white; bill, cheeks and eyes, yellow; legs and feet, black. Length, 36-42 inches.

One instance. North Hadley, Aug. 27, 1883. Three were seen and 1 shot. An accidental visitor from the south.

21. *Ardea candidissima* Gmel.

SNOWY HERON.

Pure white; cheeks, eyes and feet, yellow; bill and legs black. Length, 24 inches.

Another accidental visitor from the south. A single specimen was taken near Northampton about 1883.

22. *Ardea virescens* Linn.**GREEN HERON.**

Crown, wings and tail, dark green; back, bluish; neck, purplish chestnut with a whitish throat line; beneath, brownish-ash; legs, yellow; iris, orange. Length, 16-18 inches.

Common summer resident. Arrives last of April or early in May; departs in October. Earliest arrival April 28. Raises 1 brood. Eggs 3-6, blue. Nest of coarse sticks, nearly flat, sometimes in a bush, but usually in a tree. Eggs laid about the first of June. Feeds on insects, seeds, frogs, etc. Note, a peculiar squawk.

23. *Nycticorax nycticorax naevius* (Bodd.).**NIGHT HERON. QUA-BIRD.**

Crown and part of back, dark, glossy green; rest of bird, bluish-gray, tinged with lavender; very pale beneath. Length, 23-26 inches.

An occasional but irregular visitor along the Connecticut river.

24. *Rallus longirostris crepitans* (Gmel.).**CLAPPER RAIL.**

Above, very pale greenish-olive, the feathers margined with gray; neck and breast, pale cream-buff; belly, gray barred with white; throat, white. Length, 14-15 inches.

Accidental visitor reported once from Hadley and once from near Northampton (*vide* Morris).

25. *Rallus virginianus* Linn.**VIRGINIA RAIL.**

Above, brownish-black and tawny-olive; top of head, dark brown; wing coverts, chestnut; beneath, cinnamon-red. Length, 8-10 inches.

Probably a regular summer resident in suitable marshes but owing to its very shy and secretive manners, it is not often seen and has rarely been taken. The nest however has been found several times. Nest of grasses and sedges in marshes.

Eggs 6-12, buffy, spotted and speckled with rufous brown. Note, a peculiar cry, which has been written "cùt, cùt, cùtta-cùtta-cùtta."

26. *Porzana carolina* (Linn.).

CAROLINA RAIL. SORA.

Black, white and olive-brown; face and center of throat, black in adults; rest of throat and breast, slate-gray in adults; whole of throat and breast, brown in young. Length, 8-9 inches.

Irregular summer resident in suitable marshes. Nest of grasses or sedges on a hummock or on the ground. Eggs 8-15, ochraceous-buff spotted and speckled with brown. Note "a clear, whistled *ker-wee*" (Chapman).

27. *Porzana noveboracensis* (Gmel.).

YELLOW RAIL.

Above, streaked with blackish, brownish-yellow and white; beneath, pale brownish-yellow. Length, 7 inches.

Very rare visitor. One instance near Northampton, many years ago (*vide* Stearns).

28. *Fulica americana* Gmel.

COOT. MUD-HEN.

Dark slate; under tail coverts, white. Length, 14-16 inches.

Irregular and rather rare visitor; was formerly supposed to breed.

29. *Philohela minor* (Gmel.).

WOODCOCK.

Above, varied with black, brown, gray and russet; beneath, rich warm brown. Length, 10-12 inches.

Summer resident, formerly common; arrives in March and departs in November. Raises 1 brood. Eggs 4, brownish-clay-colored, thickly spotted with brown and stone-gray. Nest of grass, etc. on the ground. Eggs laid last of May. Feeds

on insects and worms. Notes and flight extraordinary but indescribable in brief. Most notable of our game birds.

30. *Gallinago delicata* Ord.

WILSON'S SNIPE. JACK SNIPE.

Above, blackish, speckled with whitish, bay and tawny; beneath, white, fore breast slightly speckled with dusky. Length, 11 inches.

Irregular and uncommon visitor during the migrations, especially in the late fall.

31. *Tringa minutilla* Viell.

LEAST SANDPIPER. PEEP.

Above, each feather black centered, edged with bright bay and tipped with white; beneath, white, lower throat with a brownish suffusion. Length, 6 inches.

Occasional during the spring migration, at Adam's pond and in similar places. Taken in May, 1884 and 1886.

32. *Totanus flavipes* (Gmel.).

YELLOW-LEGS. LESSER TELL-TALE.

Above, blackish speckled with whitish; beneath, white; lower throat, dusky. Length, 11 inches.

Rare and irregular visitor during the migrations.

33. *Totanus solitarius* (Wils.).

SOLITARY SANDPIPER.

Above, olive-brown finely speckled with white; beneath, white, lower throat shaded with brownish. Length, 8-9 inches.

Uncommon and uncertain migrant in May, August and September. The reported breeding near Adam's pond is undoubtedly erroneous; neither parent bird was taken.

34. *Bartramia longicauda* (Bechst.).

UPLAND PLOVER.

Above, varied blackish, whitish and tawny; lateral tail feathers, orange-brown marked with black and tipped with white; beneath, white; lower part of throat, dusky. Length, 12-13 inches.

Rare summer resident but not uncommon in the spring and fall. Earliest arrival May 8; departs in October. Raises one brood. Eggs 4, clay-colored, thickly spotted with dark brown. Nest of a few stalks of grass, and leaves, in a slight hollow on the ground, usually in an open meadow. Eggs laid the first of June. Feeds on insects and seeds. Notes loud and shrill; sometimes written *quip-ip-ip*, *quip-ip-ip*.

35. *Actitis macularia* (Linn.).

SPOTTED SANDPIPER. TIP-UP.

Above, ashy-olive, finely varied with black; beneath, white, in the adults thickly spotted with blackish; feet, flesh color or yellow. Length, 7-8 inches.

Common summer resident. Earliest arrival April 29; departs in September. Raises 1 brood. Eggs 4, buff or clay-colored, spotted with brown. Nest in a slight hollow on the ground, of a few leaves and grasses. Eggs laid the last of May. Feeds on insects, mollusks, seeds, etc. Note a loud *peet-weet*, often repeated.

36. *Numenius hudsonicus* Lath.

HUDSONIAN CURLEW.

Above, grayish brown with white spots; rump and tail, barred with, buffy and blackish; under parts, pale buffy streaked with blackish. Length, 17 inches.

Accidental visitor. One instance, a specimen taken at Northampton; now in Springfield (*fide* Morris).

37. *Aegialitis vocifera* (Linn.).

KILDEER PLOVER.

Above, grayish-brown; rump, chestnut; forehead, neck-collar and under parts, white; band above forehead, neck-collar and crescent on throat black. Length, 9-10 inches.

Rare and very irregular visitor.

38. *Aegialitis meloda* (Ord).

PIPING PLOVER.

Above, very pale ash; beneath, white; bar across crown (and in the male, incomplete ring around neck), black; band across back of neck, white. Length, 7 inches.

Rare migrant. One instance. Adam's pond, May, 1884. C. R. Kenfield.

39. *Colinus virginianus* (Linn.).

BOBWHITE. QUAIL.

Crown, neck and forepart of breast, brownish-red; above, varied with chestnut, tawny, gray and black; beneath, tawny-whitish regularly barred with black double-crescents; throat of male, white, of female, buff. Length, 9-11 inches.

Uncommon resident. Raises 1 brood. Eggs white, 8-12 in number, tho 32 are said to have been laid by a single bird. Nest of grass in bushy pastures. Eggs laid in June. Feeds on seeds, insects, etc. Note, the well-known *bob-white*.

40. *Bonasa umbellus* (Linn.).

RUFFED GROUSE. PARTRIDGE.

Varied grayish-brown and black; whitish beneath, barred with brown. Length, 16-18 inches.

Common resident. Raises 1 brood. Eggs 8-16, buff. Nest of leaves in the woods at foot of a tree or bush. Feeds on buds, berries, etc.

41. *Ectopistes migratorius* (Linn.).

PASSENGER PIGEON. WILD PIGEON.

Above, iridescent slaty-blue; beneath, in male, purplish-chestnut, in female, brownish-gray; under tail coverts, white; iris, orange. Length, 17-18 inches.

"Uncommon migrant. Earliest arrival, April 5; seen again in August and September. Feeds on seeds, insects, etc."

The above is quoted from the first edition and reveals the status of this interesting bird in 1887. Today it is an open

question whether the passenger pigeon is any more entitled to a place in this list than the wild turkey which was an undoubted inhabitant of the vicinity of Amherst in the early part of the nineteenth century. Apparently the wild pigeon is now as extinct as the wild turkey in Massachusetts, and there is no reason to expect it will ever return. In the spring of 1888 the pigeons were quite common near Amherst; one fine male was shot and individuals were seen on two other occasions, 6 together on April 17, but none were seen after that date nor in any subsequent years.

42. *Zenaidura macroura* (Linn.).

MOURNING DOVE. CAROLINA DOVE.

Grayish-blue; head and neck ochrey-brown with ruby and golden iridescence; a violet-black spot back of ear; beneath, paler than above. Length, 12 inches.

Common summer resident. Earliest arrival, March 26; departs in October. Raises 1 brood. Eggs 2, white. Nest of fine twigs in trees. Eggs laid last of May. Feeds on seeds, insects, etc. Notes, plaintive "coos."

43. *Circus hudsonius* (Linn.).

MARSH HAWK.

MALE: Bluish-ash; rump, white; belly, white thinly spotted. Length, 19 inches.

FEMALE: Dark brown above; rump, white; beneath, brownish-yellow. Length, 22 inches.

Common summer resident. Earliest arrival, March 20; departs in October. Raises 1 brood. Eggs 3-6, dull bluish white, rarely spotted. Nest of grass on the ground. Eggs laid in May. Feeds on mice, insects, birds, etc. Beneficial.

44. *Accipiter velox* (Wils.).

SHARP-SHINNED HAWK.

Dark plumbeous; tail crossed by four blackish bars; beneath white, barred crosswise in the adult, streaked longitudinally in the young, with tawny. Length, 10-14 inches.

Common migrant but has not been taken in summer. Feeds on small birds, mice and insects. Probably beneficial. Note, a shrill scream.

45. *Accipiter cooperi* (Bonap.).

COOPER'S HAWK. CHICKEN HAWK.

Coloration as in the preceding. Length, 16-20 inches.

Common summer resident. Earliest arrival, April 10; departs in October. Raises 1 brood. Eggs 3 or 4, dull white tinged with bluish, rarely marked with dark brown. Nest of sticks, twigs, bark and leaves in a tree. Eggs laid in May. Feeds on birds and small quadrupeds; often chickens and game birds. Probably injurious. Note, a loud scream.

46. *Accipiter atricapillus* (Wils.).

GOSHAWK.

Above, dark bluish-slate, each feather dark-shafted; crown, blackish; beneath, white closely barred with narrow, zigzag lines of slaty-brown, each feather with a black shaft line. In the young the upper parts are more rufous and the under parts are streaked, not barred. Length, 20-24 inches.

Not uncommon fall visitor in the vicinity of Northampton, but has not been taken in Amherst. Very destructive to poultry and game. Decidedly injurious.

47. *Buteo borealis* (Gmel.).

RED-TAILED HAWK. HEN HAWK.

Above, varied with brown, fulvous, gray and whitish; beneath, whitish streaked with brown; tail of adult, rich chestnut with a broad bar of black near the tip; tail of young, brown like the back, crossed by numerous blackish bands. Length, 20-24 inches.

Common resident. Raises 1 brood. Eggs 2-4, dull whitish usually streaked and blotched with brown. Nest large and bulky, of sticks, twigs, bark, etc. in tall trees. Eggs laid last of April. Feeds on mice and other small quadrupeds, birds and insects. Probably beneficial. Note, a loud shrill "kee kee."

48. *Buteo lineatus* (Gmel.).

RED-SHOULDERED HAWK. HEN HAWK.

Wing coverts, bright bay; above, reddish-brown, streaked with darker; beneath, orange-brown, varied with white; in the young there is much less bay on the wing-coverts. Length, 18-22 inches.

Common resident. Nesting and other habits like the preceding. Rarely attacks poultry and is undoubtedly very beneficial.

49. *Buteo latissimus* (Wils.).

BROAD-WINGED HAWK.

Above, dark brown, marked with gray and white; beneath, mixed white and fulvous. Length, 16-17 inches.

Apparently rare. Has been recorded from Pelham and Leverett. Beneficial.

50. *Archibuteo lagopus sancti-johannis* (Gmel.).

ROUGH-LEGGED HAWK.

Varying from wholly black to fuscous-brown marked with white above and white marked with blackish beneath. Length, 22 inches.

Common winter resident in the meadows along the Connecticut, but has never been taken in Amherst. Feeds on mice. Very beneficial.

51. *Aquila chrysaetos* (Linn.).

GOLDEN EAGLE.

Fuscous brown; basal part of tail and tarsal plumage, white in adult; basal part of tail, brown with grayish bars and tarsal plumage, buffy, in young. Length, 30-40 inches.

Very rare, accidental visitor. A young specimen was captured in North Belchertown in November, 1902, by means of a steel trap and was afterwards exhibited in Springfield and placed in the collection of living birds in the park there.

52. *Haliaeetus leucocephalus* (Linn.).**BALD EAGLE.**

Brown; head and tail white in adult. Length, 33-36 inches.

Rare and accidental visitor, occasionally seen near, or flying towards, the mountains by the Connecticut river.

53. *Falco rusticolus* (Linn.).**GYRFALCON.**

Above, more or less imperfectly barred with dark brown and pale ash; beneath, white streaked with dusky. Length, 24 inches.

Very rare winter visitor. One specimen taken at Northampton in the winter of 1879, by Mr. E. O. Damon. The specimen is now in the Science building, Springfield, and is said to be subspecies *gyrfalco*. (Morris.)

54. *Falco peregrinus anatum* (Bonap.).**DUCK HAWK.**

Above, dark bluish-ash; beneath creamy-white spotted or streaked with blackish except on throat and upper breast; adult barred rather than streaked beneath. Length, 19 inches.

Very rare summer resident, more common in the fall. Known to breed on Mt. Tom and has bred on Sugarloaf. Nest on rocky ledges, sometimes of sticks and rubbish, but often the eggs are laid on the bare rock. Eggs 2-4, creamy-white or pale reddish, heavily marked with brown. Eggs laid in April. Feeds chiefly on birds and is doubtless injurious.

55. *Falco columbarius* (Linn.).**PIGEON HAWK.**

Above, brown (bluish penciled with black in full plumaged male); beneath, white tinged with tawny, streaked with dark brown. Length, 12 inches.

Rare and irregular visitor, probably only during the migrations, though it has been reported in winter.

56. *Falco sparverius* (Linn.).**SPARROW HAWK.**

Crown, ashy-blue, usually with a chestnut patch; seven black spots about the head; black, chestnut, with black bars in the female; tail, chestnut with black bars, and in the male, with outer feathers and tips, white; beneath buffy, streaked with brown in the female. Length, 10-11 inches.

Common summer resident. Earliest arrival, March 18; departs in October. Raises 1 brood. Eggs 3-7, reddish, spotted with brown. Nest in holes in trees. Eggs laid first of June. Feeds on insects, mice, etc. Beneficial. Note, a high shrill scream often repeated, which Chapman writes "*killy-killy-killy-killy*."

57. *Pandion haliaetus carolinensis* (Gmel.).**FISH HAWK, OSPREY.**

Above, dark brown, the feathers edged with white; head, neck and beneath, white; crown and breast streaked with blackish or brown. Length, 22-24 inches.

Common spring visitor in Hadley and near the Connecticut river, but rare in Amherst. Less common in the fall. Feeds on fish entirely. Note, a whistling scream.

58. *Asio wilsonianus* (Less.).**LONG-EARED OWL.**

Varied everywhere with black and tawny; no white on throat. Length, 14-16 inches.

Uncommon resident. Raises 1 brood. Eggs 5, white. Nest in an old crow's or hawk's nest, or in a hollow tree. Eggs laid in May. Feeds on mice chiefly. Beneficial.

59. *Asio accipitrinus* (Pall.).**SHORT-EARED OWL.**

Varied everywhere with brown, white and tawny. Length, 15 inches.

Very rare in Amherst, but seems to be common as a winter visitor near Northampton, at least in some years.

60. *Syrnium nebulosum* (Forst.).

BARRED OWL.

More or less regularly barred with liver-brown and whitish, iris black or dark brown. Length, 18-20 inches.

Regular but not common resident, least common in summer. Nest usually in a hollow tree, or in an old crow's nest. Eggs 2-4, white. Feeds on mice, birds, cray-fish, etc. Probably beneficial. Note, a loud hoot, sometimes written "*whoo-whoo-whoo-whoo, who-whoo, to-whoo-ah*" (Chapman).

61. *Scotiaptex cinereum* (Gmel.).

GREAT GRAY OWL.

Dusky-grayish-brown and grayish-white. Length, 25-30 inches.

Very rare winter visitor; reported once from Northampton (Morris).

62. *Nyctala acadica* (Gmel.).

SAW-WHET OWL.

Above, purplish-brown, marked with white; beneath, white, marked with tawny. Length, 6-8 inches.

Very rare visitor. One instance. Amherst, October, 1886. C. R. Kenfield.

63. *Megascops asio* (Linn.).

SCREECH OWL. RED OWL. MOTTLED OWL.

Mottled gray, black and white, or pure rusty-red, streaked beneath. Length, 10-11 inches.

Common resident but least common in summer. Raises 1 brood. Eggs 4-6, white. Nest in a hollow tree. Eggs laid in May. Feeds on mice, insects, etc., very rarely poultry. Beneficial. Notes, wierd cries and moans.

64. *Bubo virginianus* (Gmel.).

GREAT HORNED OWL.

Black and tawny with a white collar on the throat. Length, 24 inches,

Common resident. Raises 1 brood. Eggs 2 or 3, white. Nest in a hollow tree or in that of a hawk or crow. Eggs laid in March. Feeds on birds and quadrupeds. Injurious. A famous "hooter."

65. *Nyctea nyctea* (Linn.).

SNOWY OWL.

White, more or less marked with brownish-black. Length, 24 inches.

Rare and irregular winter visitor, seldom seen in Amherst but more frequent in the Hadley meadows.

66. *Surnia ulula caparoch* (Mull.).

HAWK OWL.

Above, brown marked with white; beneath, white marked with brown. Length, 15 inches.

Very rare winter visitor. Two instances; one at Northampton and one in Hadley. The latter was in March, 1884, when a pair were taken by Mr. Henry Moody.

67. *Coccyzus americanus* (Linn.).

YELLOW-BILLED CUCKOO.

Above, iridescent olive-brown; beneath, white; tail, broadly tipped with white; no colored ring around eye; bill black and yellow. Length, 12 inches.

Uncommon summer resident. Arrives late in May; departs in August or September. Raises 1, or perhaps 2 broods. A nest with 2 fresh eggs was found July 2, 1884. Eggs 2-4, pale blue. Nest of a few twigs, leaves and grasses, with oak and willow catkins, loosely put together in a low tree, often an apple. Eggs laid in June. Feeds on insects, caterpillars, berries, etc. Very beneficial. Note similar to that of a tree-toad.

68. *Coccyzus erythrophthalmus* (Wils.).

BLACK-BILLED CUCKOO.

Similar to preceding, but less white on tail, a narrow red or yellow ring around eye, and bill, black and bluish. Length, 12 inches.

Common summer resident. Earliest arrival May 13; departs in August or September. Raises 1 brood. Eggs 2-4, blue. Nest of fine twigs, grass, down and rubbish, loosely put together in a low tree, bush or grape-vine. Eggs laid the last of May. Feeds on insects, caterpillars, berries, etc. Very beneficial. Note, like a tree-toad's.

69. *Ceryle alcyon* (Linn.).

BELTED KINGFISHER.

Above, dull blue; in the male, sides and band across breast same color as back but in female, nearly chestnut; beneath, white. Length, 12-13 inches.

Uncommon summer resident, absent only when the ponds are frozen. Raises 1 brood. Eggs 6-8, white. Nest in holes in banks of streams or near water. These holes are made by the birds and measure from 3 to 9 feet in length; the far end is slightly enlarged and a little rubbish is placed there for a nest. Eggs laid about the first of June. Feeds wholly on fish. Injurious only in stocked ponds. Note, like a watchman's rattle.

70. *Dryobates villosus* (Linn.).

HAIRY WOODPECKER.

Above black and white; outer tail feathers and beneath, white. Male with a scarlet band on the nape. Length, 9-10 inches.

Uncommon resident. Raises 1 brood. Eggs 4-6, white. Nest in a hole in a tree. Eggs laid the first of June. Feeds on insects and their larvae. Beneficial. Note, a loud, rattling call.

71. *Dryobates pubescens* (Linn.).**DOWNY WOODPECKER.**

Above, black and white; beneath, white. Male with scarlet on nape. Length, 6-7 inches.

Common resident, Raises 1 brood. Eggs 4-6, white. Nest in a hole in a tree. Eggs laid about the first of June, Feeds on insects and their larvae. Beneficial. Note, a clear, rattling call, besides the "tattoo" which all woodpeckers delight to beat on a dead limb.

72. *Picoides arcticus* (Swains.).**ARCTIC THREE-TOED WOODPECKER.**

Above, shining black; beneath, white; sides, wings and tail, black and white; male with bright orange-yellow patch on crown. Length, $9\frac{1}{2}$ inches.

Very rare winter visitor. One instance. Mt. Nonotuck, Easthampton; William Street. Date? (*vide* Morris).

73. *Sphyrapicus varius* (Linn.).**YELLOW-BELLIED WOODPECKER. SAPSUCKER.**

Black and white, tinged with yellow especially on the belly; top of head, and in the male, throat, bright red. Length, 8-9 inches.

Rare visitor during the migrations, in April and October. Feeds largely on sap. Injurious.

74. *Ceophlœus pileatus* (Linn.).**PILEATED WOODPECKER. LOGCOCK.**

Black; throat, sides of neck and basal part of wings, white; part of crown, red. Length, 17 inches.

Like the passenger pigeon, probably exterminated in Hampshire county, though it formerly occurred occasionally and may have been a resident.

75. *Melanerpes erythrocephalus* (Linn.).**RED-HEADED WOODPECKER.**

Head, red; rump, secondaries and belly white: elsewhere, blue-black. Length, 10 inches.

Rare and irregular visitor, occasionally seen in spring and fall.

76. *Colaptes auratus* (Linn.).

FLICKER. GOLDEN-WINGED WOODPECKER.

HIGH-HOLE.

Above olive-brown banded with black; rump, white; beneath, pale brown spotted with black; nape, red; lining of wings and tail, golden-yellow. Length, 12-13 inches.

Common summer resident. Earliest arrival, March 15; departs in November. Raises 1 brood. Eggs 6-8, white. Nest a hole in a tree. Feeds on insects, berries, etc. Very beneficial. Note, a vociferous calling of two syllables, often repeated; may be written "*yuc-ca-yuc-ca-yuc-ca*," etc.

77. *Antrostomus vociferus* (Wils.).

WHIPPOORWILL.

Mottled with black, white, gray and tawny; first three pairs of tail feathers, white or tawny at tip. Length, 9-10 inches.

Not uncommon summer resident. Earliest arrival, May 5; departs in September. Raises 1 brood. Eggs 2, white, beautifully spotted with brown and lavender; laid on the ground in deep woods, the last of May. Feeds on insects. Very beneficial. Note, the well-known 3-syllabled call, *whip-poor-will*, often repeated, sometimes in rapid succession for several minutes.

78. *Chordeiles virginianus* (Gmel.).

NIGHT HAWK.

Above, mottled with black, brown, gray and tawny; beneath, barred with blackish and white or pale fulvous; throat, with a large white or tawny cross-bar. Length, 9-10 inches.

Common summer resident. Earliest arrival March (?) 18, 1871 (Stearns); usually appears in May; departs in September. Raises 1 brood. Eggs 2, pale olive-brown, thickly and finely spotted with a darker shade of the same; laid on the ground or on a rock, the last of May. Feeds on insects. Beneficial. Note, a loud rather sharp monosyllable.

79. *Chaetura pelagica* (Linn.).

CHIMNEY SWIFT. CHIMNEY SWALLOW.

Sooty-brown, paler beneath. Length, 5 inches.

Abundant summer resident. Earliest arrival, April 22; latest date of departure, Oct. 31 (I. C. Greene). Raises 2 broods. Eggs 3-5, white. Nest of twigs, glued together by the bird's saliva, in a chimney. Eggs laid in May and June. Feeds on insects. Very beneficial. Notes, a rapid, rather shrill twitter.

80. *Trochilus colubris* Linn.

RUBY-THROATED HUMMINGBIRD.

Metallic green; male with a brilliant, ruby-red throat; female with under parts dusky-whitish. Length, 3 inches.

Common summer resident. Earliest arrival, May 6; departs in September. Raises 1 brood. Eggs 2, white. Nest of moss, covered with lichens and lined with fern or thistle-down, saddled on the limb of a tree. Eggs laid in June. Feeds on insects and honey. Beneficial. Male occasionally utters a sharp chirp.

81. *Tyrannus tyrannus* (Linn.).

KINGBIRD.

Above, brownish-black; beneath and tip of tail, white; concealed patch on crown, fiery-orange. Length, 8 inches.

Abundant summer resident. Earliest arrival, April 25; departs in September. Raises 2 broods. Eggs 3-5, cream-

colored, spotted with brown and lavender. Nest of weeds and grasses, lined with fine roots, usually in an apple tree. Eggs laid in May and June. Feeds on insects. Very beneficial, Note, a shrill twitter.

82. *Myiarchus crinitus* (Linn.).

GREAT-CRESTED FLYCATCHER.

Olivaceous; breast, ashy; belly, yellow; tail, chestnut. Length, 8-9 inches.

Uncommon summer resident. Arrives early in May; departs in September. Raises 1 brood. Eggs 3-5, buff with strange, scraggling, purplish lines all over the surface. Nest of grass, weeds and snake-skins in a hollow tree. Eggs laid early in June. Feeds on insects. Beneficial. Note a harsh and characteristic scream.

83. *Sayornis phoebe* (Lath.).

PHOEBE. BRIDGE PEWEE. HOUSE PEWEE.

Dull olivaceous brown; beneath yellowish; sides and breast, ashy. Length, 7 inches.

Abundant summer resident. Earliest arrival, Feb. 20; departs in October or November. Raises 2-3 broods. Eggs 3-6, white usually with a few brown spots. Nest of grass, mud, moss, etc., lined with feathers or hair; situated under the eaves of a building or under bridges or rocks. Eggs laid in May, June and July. Feeds on insects. Beneficial. Note, "pe-wée," usually not drawled, but sometimes very much so.

84. *Contopus virens* (Linn.).

WOOD PEWEE.

Above, dull olive; beneath, whitish; sides and band across breast, dusky; two noticeable white bars on wing. Length, 6½ inches.

Common summer resident. Earliest arrival, May 22; departs in September. Raises 2 broods. Eggs 3-4, cream-colored,

spotted with brown and lavender. Nest of fine grass, lined with hair and covered externally with lichens, on the limb of a tree. Eggs laid in June and July. Feeds on insects. Beneficial. Note, a drawled “*pe-wēē*.”

85. *Empidonax flaviventris* Baird.

YELLOW-BELLIED FLYCATCHER.

Above, olive-green; beneath, yellow. Length, 5½ inches.

Uncommon and irregular migrant, arriving about May 20; not recorded in the fall. Feeds on insects. Beneficial. Note, either an abrupt “*Psē-ēk*” or a plaintive “*chū-ē-ē’-p*” (Dwight).

86. *Empidonax traillii* (Aud.).

TRAILL’S FLYCATCHER.

Above, dull olive; beneath, white with sides and band across breast, dusky. Length, 6 inches.

Uncommon migrant and possible summer resident. Eggs 4, creamy-white with brown spots. Nest of grass, plant fibres and down, in the crotch of a bush. Eggs laid in June. Notes, a somewhat rasping “*ēē-zēē’-ē-ūp*” (Dwight).

87. *Empidonax minimus* (Baird.).

LEAST FLYCATCHER. CHEBEC.

Above, dull olive; beneath, whitish, dusky on sides and breast. Length, 5½ inches.

Common summer resident. Earliest arrival April 30; departs in August or September. Raises 1 brood. Eggs 3-5, white. Nest of fine grass, hair, bark, down, etc. in the crotch of a tree. Eggs laid about June 1. Feeds on insects. Very beneficial. Note, a clear and sharp “*che-bēc*.”

88. *Cyanocitta cristata* (Linn.).**BLUE JAY.**

Above, purplish-blue; beneath, ashy, whitening on throat, belly and under tail coverts; a black collar encloses the throat and the conspicuous crest; wings and tail, rich blue marked with black and white. Length, 11-12 inches.

Abundant resident. Raises 1 brood. Eggs 4-6, olive green, thickly spotted with a darker shade of the same. Nest of twigs and roots, usually in pine trees. Eggs laid early in May. Feeds on eggs, young birds, insects, seeds, nuts, etc. Beneficial? Note, a harsh unmusical scream.

89. *Corvus corax principalis* Ridgw.**RAVEN.**

Black, with steel-blue reflections. Length, about 24 inches.

Very rare, accidental visitor. One instance. Northampton. E. O. Damon.

90. *Corvus americanus* Aud.**CROW.**

Black, with steel-blue or purplish reflections. Length, 19 inches.

Abundant resident. Raises 1 brood. Eggs 4-6, greenish, thickly spotted with dark olive; more rarely pale bluish, with reddish or light brown spots. Nest of sticks, leaves and bark, in trees. Eggs laid early in May. Feeds on young birds, eggs, grain, seeds and insects. Beneficial. Note, a hoarse "caw."

91. *Dolichonyx oryzivorus* (Linn.).**BOBOLINK.**

MALE in breeding plumage: Black; back, ashy-white; nape, buff.

FEMALE, young and male in fall: Above, yellowish-brown streaked with black; beneath, unstreaked brownish yellow. Length, $6\frac{1}{2}$ - $7\frac{1}{2}$ inches.

Common summer resident. Earliest arrival, April 4 (Miss Morse); departs in September. Raises 2 broods.

Eggs 4-6, stone-gray, mottled and spotted with various shades of brown. Nest of grass, on the ground in open fields. Eggs laid early in June and in July. Feeds on insects, seeds, etc. Beneficial. Notes, the familiar, clear, rollicking *bob-o-link*, rapidly repeated with variations.

92. *Molothrus ater* (Bodd.).

COWBIRD. COW BLACKBIRD.

MALE: Lustrous green-black; head and neck, coffee brown.

FEMALE: Dusky grayish-brown, each feather centered with darker. Length, 7-8 inches.

Common summer resident. Earliest arrival, March 9 (Miss Morse); latest departure in Oct. 14 (I. C. Greene). Eggs white thickly spotted with pale brown; laid in the nests of other, usually smaller, birds; as many as 5 cow-birds eggs have been found in one nest, but whether laid by five different females or not is not known, nor do we know how many eggs each female lays. Feeds on insects, seeds, etc. Possibly beneficial in its choice of food, but there is little else to be said in favor of this sneaking, shiftless bird. (See Chapman, p. 263). Notes, few and unmusical.

93. *Agelaius phoeniceus* (Linn.).

RED-WINGED BLACKBIRD.

ADULT MALE: Black; lesser wing coverts, bright scarlet; middle coverts, buff.

FEMALE AND YOUNG: Above, blackish-brown with pale streaks; beneath, whitish, streaked with dusky; chin and bend of wing often tinged with reddish. Length, 8-9 inches.

Common summer resident. Earliest arrival, March 11; latest departure Oct. 29 (I. C. Greene). Raises 2 broods. Eggs 3-5, pale greenish or bluish, spotted and streaked with dark brown and black. Nest of grass, rushes, leaves, etc. in low bushes, on tussocks, or among cat-tails. Eggs laid in May and early in July. Feeds on insects, grain, seeds, etc. Beneficial. Note, a loud "*kong-ga-rēē*"

94. *Sturnella magna* (Linn.).

MEADOW LARK.

Above, streaked with black, brown and gray; breast, bright yellow with a large, black crescent; sides and undertail-coverts, pale brown, streaked with black. Length, 10 inches.

Common summer resident. Earliest arrival, March 8 (Miss Morse); departs in November. Raises 2 broods. Eggs 3-5, white, spotted with bright brown. Nest of grass, on the ground. Eggs laid in May and July. Feeds on insects, seeds, etc. Beneficial. Note, a clear, rather plaintive, agreeable whistle.

95. *Icterus spurius* (Linn.).

ORCHARD ORIOLE.

MALE: Chestnut, with wings, tail and fore parts of the body, black.

FEMALE AND YOUNG: Olive-green above; yellowish beneath. The male in the second year is like the female but has a black throat. Length, 7 inches.

Rare and irregular summer resident. Nest pensile, of grasses, etc., in a tree. Eggs 3-5, bluish-white, marked with blackish. Feeds on insects. Beneficial. A notably skillful and sweet singer.

96. *Icterus galbula* (Linn.).

BALTIMORE ORIOLE. HANG-NEST. FIRE HANG-BIRD.

MALE: Head, neck, back, wings and middle tail feathers, black; else where bright orange.

FEMALE AND YOUNG: Above, mixed dusky and yellow-olive; beneath dull orange. Length, 7½-8 inches.

Common summer resident. Earliest arrival, May 2; departs in September. Raises 2 broods. Eggs 3-6, bluish-or-brownish-white, marked with blackish. Nest of grass, hair, string, rags, etc., compactly put together and skillfully suspended from the end of a limb of some tree, most commonly an elm. Eggs laid in May, June and July. Feeds chiefly on insects. Very beneficial. A loud and beautiful singer.

97. *Scolecophagus carolinus* (Mull.).

RUSTY BLACKBIRD.

MALE: Black, with greenish reflections; iris, cream-colored.

FEMALE: Slaty-blackish, duller beneath; iris, brown.

Rare but regular migrant. Earliest arrival, March 15; leaves for the north the last of April; appears again in September and October. Feeds on insects chiefly. Beneficial. Note, very similar to the squeak of an ungreased wheelbarrow.

98. *Quiscalus quiscula* (Linn.).

CROW BLACKBIRD. PURPLE GRACKLE.

Iridescent black; iridescence not specially defined in color or area. Length, 12-13 inches.

98a. *Q. q. avenus* (Ridgw.).

BRONZED GRACKLE.

Iridescence of head, steel-blue; of back, brassy; of wings and tail, violet. Length, 12-13 inches.

Crow blackbirds are common summer residents in Amherst, but what proportion are "purple grackles" is still to be determined. In the years 1886-89, I took males of both the purple and bronzed grackles, but unfortunately made no effort to determine their relative abundance. In the first edition of this work, the purple grackle is given as the common form, but in 1901, Morris states that the purple grackle is not known to occur at Springfield, and Chapman does not give it as occurring at Cambridge. It seems probable therefore that the common crow blackbird in Amherst is the bronzed grackle, and that the purple grackle is a more or less irregular visitor. Earliest arrival, March 10; latest departure, Nov. 1 (I. C. Greene). Raises 1 brood. Eggs 3-6, greenish or brownish, marked with blackish. Nest of grass, weeds, mud, etc. in a tree, usually a pine. Eggs laid about the middle of May. Feeds on insects, grain, etc. Beneficial. Notes, loud and harsh squeaks.

99. *Coccythraustes vespertinus* (Coop.).

EVENING GROSBEAK.

MALE: Crown and tail, black; forehead, rump and belly, yellow; wings, black and white.

FEMALE: Brownish-gray tinged with yellow; wings and tail, black and white. Length, 8 inches.

Very rare, accidental visitor. One instance; January to April, 1890. The first specimen was taken Jan. 8 but later in the winter the birds became quite common and were often seen in flocks, feeding together on the ground. The normal habitat of this species is west of the Great Lakes.

100. *Pinicola enucleator* (Linn.).

PINE GROSBEAK.

MALE in full plumage: Rosy-red, brightest on head.

FEMALE and male in winter: Ashy-gray; crown and rump varying from saffron to brick-red. Length, 8.9 inches.

Frequent but very irregular winter visitor. Occurs in flocks. Feeds on buds, seeds, etc. Probably injurious. Notes, very feeble.

101. *Carpodacus purpureus* (Gmel.).

PURPLE FINCH. LINNET.

MALE: Rose-red, brightest on crown, dullest on back; belly, whitish.

FEMALE: Olivaceous-brown above; white beneath; everywhere except on throat and breast, streaked with brown. Length, 6.6½ inches.

Common summer resident. Earliest arrival, March 6; departs in October or later. Raises 2 broods. Eggs 3-5, greenish spotted with blackish-brown. Nest of grass, twigs, hair, etc. in an evergreen tree. Eggs laid in May and July. Feeds on buds, blossoms, leaves and seeds. Injurious. A very pleasing, though not powerful, songster.

102. *Passer domesticus* Linn.

ENGLISH SPARROW.

Ashy-gray; middle of back streaked with black and bay; beneath ashy-

white; in male, chin and throat, black, and crown, bordered with chestnut. Length, $6\frac{1}{2}$ inches.

Abundant resident. Raises 2-4 broods. Eggs 4-7, grayish-white, spotted with dark gray. Nest of cotton, feathers, grass, string, etc., in holes in tree, houses, etc. Eggs laid from April to August. Feeds on grain, seeds, buds, flowers, and occasionally insects. Very injurious. Notes, loud and quarrelsome; a disagreeable chatter.

103. *Loxia curvirostra minor* (Brehm.).

RED CROSSBILL.

MALE: Dull red of some shade, rarely orange or yellow.

FEMALE: Dull greenish-olive, yellower on the rump. Length, 6 inches.

Uncommon and very irregular visitor in winter and spring; latest date seen, May 2. Feeds on pine seeds, buds, etc. Probably injurious. Note, a short whistle.

104. *Loxia leucoptera* (Gmel.).

WHITE-WINGED CROSSBILL.

Similar to preceding, but the male is more pink, and there are noticeable white marks on the wings. Length, 6 inches.

Occasionally seen in winter but much rarer than the preceding, which it closely resembles in habits and notes.

105. *Acanthis linaria* (Linn.).

LESSER RED-POLL.

Forehead and throat-spot, blackish; crown, crimson; above, varied with brown and dusky; beneath, white streaked with dusky. Length $5\frac{1}{2}$ inches.

Irregular winter visitor. Some years quite common in the winter and early spring; other years not seen at all. Feeds on seeds. Probably beneficial.

106. *Spinus tristis* (Linn.).

GOLDFINCH. YELLOW-BIRD. WILD CANARY.

MALE in spring: Bright yellow; crown, wings and tail, black.

FEMALE, and male in winter: Olive-brownish above, including the crown; beneath whitish, tinged with yellow. Length 5 inches.

Common resident. Raises 1 brood. Eggs 3-6, bluish-white, without spots. Nest of grass, bark, tow, etc., lined with thistle-down, or rarely, fern-down, placed in a crotch or on the limb of a tree. Eggs laid last of July and in August. Feeds chiefly on seeds. Doubtfully beneficial. Notes, clear and canary-like; the ordinary call has been written "*per-chi-co-ree*" (Chapman).

107. *Spinus pinus* (Wils.).

PINE FINCH. SISKIN.

Varied black, buff and white, lighter beneath, strongly tinged with yellow; bases of wing and tail feathers, yellow. Length, $4\frac{1}{2}$ -5 inches.

Rare, irregular winter visitor. Very common from March 16 to April 21, 1888, but no other visits are recorded.

108. *Plectrophenax nivalis* (Linn.).

SNOW BUNTING.

Above, varied with brown and black; elsewhere, white, except parts of wings and tail, which are black. Length, 7 inches.

Rare and very irregular winter visitor, occurring usually only during severe winters.

109. *Poocætes gramineus* (Gmel.).

VESPER SPARROW. GRASS FINCH. BAY-WINGED BUNTING.

Above, pale ashy-brown; beneath, white; everywhere streaked with dusky brown; bend of wing, bright bay; two outer tail feathers, mostly white. Length, 6 inches.

Very common summer resident. Earliest arrival, April 2; departs in November. Raises 2 or perhaps 3 broods. Eggs 4-5, grayish-white, spotted and streaked with brown. Nest of fine grass, on the ground. Eggs laid from April to July. Feeds chiefly on seeds. Not injurious. Notes, usually rather weak, but in spring the song may be clear and ringing.

110. *Ammodramus sandwichensis savannah* (Wils.).**SAVANNAH SPARROW.**

Above, dark brownish-gray; beneath, white; everywhere thickly streaked with blackish; edge of wing, yellow. Length, $5\frac{1}{2}$ inches.

Rather uncommon migrant. Earliest arrival, April 4; seen for about a month and again in October. Feeds on seeds, etc. Not injurious. Song, a peculiar series of notes, something like a frog. Something of a ventriloquist and quite shy.

111. *Ammodramus henslowii* (Aud.)**HENSLOW'S SPARROW.**

Above, varied with brown, gray, black and chestnut; edge of wing, yellow; beneath, whitish, tinged strongly on breast and sides with buff; all these buff parts thickly streaked with black. Length, 5 inches.

Not rare summer resident. Earliest arrival, May 7; departs in October(?). Raises 1 brood. Eggs 4-5, grayish-white, thickly and evenly speckled with pale reddish-brown. Nest of grasses, on the ground. Eggs laid about June 1. Feeds on seeds, etc. Not injurious. Notes, sharp; have been written "tee-wick" and "sis-r-r-rit-srit-srit" (Jouy). A shy, secretive little bird, first noted here in 1882.

112. *Zonotrichia leucophrys* (Forst.).**WHITE-CROWNED SPARROW.**

Crown, pure white with a broad, black stripe on each side; dark ash, paler beneath; middle of back streaked with brown. Length, $6\frac{1}{2}$ -7 inches.

Rather rare and irregular migrant, sometimes seen in May but has not been recorded in the fall. Habits and even the notes, a good deal like the next species.

113. *Zonotrichia albicollis* (Gmel.).**WHITE-THROATED SPARROW. PEABODY-BIRD.**

Above, ashy-brown, streaked with black and bay; beneath, plain ashy; crown, with three white and two black strips; a yellow line in front of eye; throat, white. Length, $6\frac{1}{2}$ -7 inches.

Common migrant. Earliest arrival, April 19 (Professor Fernald); seen again in the fall; latest departure, Nov. 9 (I. C. Greene). Feeds on seeds, etc. Not injurious. Notes, sweet and clear, the most common being the well-known "*ah-peábody-peábody, peábody.*"

114. *Spizella monticola* (Gmel.).

TREE SPARROW.

Crown, chestnut; above, streaked with black, bay and flaxen; beneath, plain ash; two white bars on wing; an indistinct dark spot on center of breast; bill black and yellow. Length, 6 inches.

Common winter resident. Arrives last of October; departs in April. Feed on seeds. Not injurious. Note, a bright chirp.

115. *Spizella socialis* (Wils.).

CHIPPING SPARROW. CHIPPY.

Crown, chestnut; back streaked with black, bay and grayish-brown; beneath ashy; no spot on breast; bill black. Length, 5-5½ inches.

Abundant summer resident. Earliest arrival March 3 (Stearns); departs in November. Raises 2 broods. Eggs 3-5, greenish-blue, spotted with blackish-brown. Nest of grass, stalks, etc., lined with hair, in small trees and bushes. Eggs laid from May to July. Feeds on seeds, insects and worms. Beneficial. Note, a short, sweet chirp, lengthened as a song into the familiar "*chippy-chippy.*"

116. *Spizella pusilla* (Wils.).

FIELD SPARROW.

Crown and back, pale chestnut, the latter streaked with black and ashy; beneath pale ashy-white; bill pale reddish. Length, 5½ inches.

Common summer resident. Earliest arrival, April 8; departs in October. Raises 2 broods. Eggs 3-5, whitish, thickly spotted with rusty-brown. Nest of grass, on the ground, or in low bushes. Eggs laid, May to July. Feeds on seeds,

insects, etc. Beneficial. A sweet singer; song, a clear, plaintive trill.

117. *Junco hyemalis* (Linn.).

JUNCO. SNOWBIRD.

Above, breast and throat, dark slate; belly and two outer tail feathers, white. Length, 6-6½ inches.

Common, sometimes abundant, winter resident. Earliest arrival, September 23; latest departure, May 7. Feeds on seeds. Not injurious. Note, a sort of snapping chirp.

118. *Melospiza fasciata* (Gmel.).

SONG SPARROW.

Above, brown thickly streaked with black and rufous; beneath, white streaked with brownish-black; some of the streaks form a characteristic blotch at center of the breast. Length, 5½ inches.

Abundant summer resident. Earliest arrival, March 15; departs in November. Raises 2-3 broods. Eggs 3-6, bluish or brownish-gray, thickly spotted with dark brown. Nest of grass, mud, stalks, hair, etc., on the ground or in low bushes. Eggs laid, April to July. Feeds on seeds and insects. Beneficial. A pleasant songster; song, a short, clear whistle.

119. *Melospiza lincolni* (Aud.).

LINCOLN'S SPARROW.

Above, black, brown and gray; beneath, white; sides, band across breast and under tail-coverts, buff streaked with black. Length, 6 inches.

Rare, but probably regular, migrant in May and September and October. Several specimens have been taken in May, but so far as the records go, it has not occurred in the fall. Shy and silent, it is naturally a very inconspicuous bird.

120. *Melospiza georgiana* (Lath.).

SWAMP SPARROW.

Crown, bright bay blackening in front; above, thickly streaked with black and bay; beneath, clear ash. Length, 5½ inches.

Regular summer resident, rather common in suitable locations—thick swamps. Earliest arrival, April 4; departs in October. Eggs 4-5, grayish thickly covered with brown markings. Nest of grass, on a tussock in a swamp. Eggs laid in June. Feeds on seeds and insects. Not injurious. Not much of a songster; usual note, a loud chirp.

121. *Passerella iliaca* (Merr.).

FOX SPARROW.

Above, rich rust-red; beneath, white spotted with rusty. Length, 7 inches.

Common spring and fall migrant. Earliest arrival, March 15; latest departure, April 23; seen again in October and November. Feeds on seeds. Not injurious. Said to be an exceedingly fine singer; usual note, a sharp chirp.

122. *Pipilo erythrophthalmus* (Linn.).

CHEWINK. TOWHEE.

MALE: Above and throat, black; sides, chestnut; belly and markings on wings and tail, white.

FEMALE: Bright grayish-brown where male is black; otherwise similar. Length, 8-8½ inches.

Common summer resident. Earliest arrival, April 22; departs in October. Raises 1 or 2 broods. Eggs 3-5, whitish, speckled with reddish. Nest of grass and leaves, on the ground. Eggs laid in May and June. Feeds on seeds and insects. Beneficial. Something of a singer, but usual note, a loud, clear "*chew-wink*."

123. *Cardinalis cardinalis* (Linn.).

CARDINAL BIRD.

Rich red; bill surrounded by black. Length, 8.9 inches.

Very rare, accidental visitor. Some of the recorded instances were probably escaped cage-birds.

124. *Zamelodia ludoviciana* Linn.

ROSE-BREASTED GROSBEAK.

MALE: Above and throat, black; belly and rump, white; rest of under parts, rose-red.

FEMALE: Above, brown streaked with whitish; beneath, white, streaked with brown; lining of wings, saffron-yellow. Length, about 8 inches.

Rather uncommon summer resident. Earliest arrival, May 8 (Professor Fernald); departs in September. Raises 1 brood. Eggs 4-5, pale blue, with numerous brown markings. Nest of fine twigs, weed stalks, and rootlets, in trees. Eggs laid in June. Feeds on seeds and insects. Beneficial. A notable songster; song, pure and joyous, sometimes compared to that of a robin.

125. *Passerina cyanea* (Linn.).

INDIGO-BIRD. INDIGO BUNTING.

MALE: Bright blue, duller beneath.

FEMALE: Dusky, streaked with darker. Length, 5-5½ inches.

Common summer resident. Earliest arrival, May 10; departs in September. Raises 1 brood. Eggs 2-5, pale bluish-white. Nest large and deep, of grass and hair, in a low bush. Eggs laid in June. Feeds on seeds and insects. Beneficial. A cheerful but not a powerful songster.

126. *Piranga erythromelas* Vieill.

SCARLET TANAGER.

MALE: Bright scarlet; wings and tail, black.

FEMALE: Clear olive; beneath, yellow. Length, about 7 inches.

Not uncommon summer resident. Earliest arrival May 8 (Miss Morse); departs in September. Raises 1 brood. Eggs 4-5, greenish-blue, finely spotted with brown and lilac. Nest of twigs and roots, loosely put together on the limb of a tree, usually an oak. Eggs laid in June. Feeds on insects. Beneficial. Note, "a distinctly uttered '*chip-chirr*'"; song, loud, cheery, rhythmical" (Merriam).

NOTE. *Piranga rubra*, Red-bird, recorded from Amherst in 1867 was an escaped cage-bird.

127. *Progne subis* (Linn.).

PURPLE MARTIN.

MALE: Royal purple or shining blue-black.

FEMALE: Head, purple; elsewhere dull brownish with some purple tinge. Length, 8 inches.

“Formerly common; now rare, being restricted to a few colonies in various parts of the town principally at North Amherst. Arrives about May 1 and departs in September. Raises 1-2 broods. Eggs 4-6, white. Nest of hay, feathers, etc., in bird-houses. Eggs laid in May and June. Feeds on insects. Beneficial. Note, a sort of chattering.”

The above is copied from the first edition of this work. It described the situation down to about 1890, but whether the martins still persist at North Amherst, I cannot say.

128. *Petrochelidon lunifrons* (Say.).

EAVE SWALLOW. CLIFF SWALLOW.

Back, crown and spot on throat, steel-blue; band across neck and beneath, rusty-gray; forehead rufous. Length, 5-5½ inches.

Common summer resident. Earliest arrival, May 2; departs in September. Raises 1 or 2 broods. Eggs 3-5, white, thickly spotted with brown and black. Nest of hay, feathers and mud, flask shaped, built on the outside of barns and sheds, under the eaves. Eggs laid from May to July. Feeds on insects. Beneficial. Note, a constant twitter.

129. *Chelidon erythrogaster* (Bodd.).

BARN SWALLOW.

Above, lustrous steel-blue; forehead and underparts, rufous. Length 6-7 inches.

Abundant summer resident. Earliest arrival, April 15; departs in September. Raises 2-3 broods. Eggs 3-5, white,

thickly marked with brown and black. Nest built of mud, hay and feathers, on rafters in barns. Eggs laid from May to July. Feeds on insects. Beneficial. Note, a constant twitter.

130. *Tachycineta bicolor* (Vieill.).

WHITE-BELLIED SWALLOW.

Above, dark lustrous green or blue; beneath white. Length, 6 inches.

Common summer resident. Earliest arrival, April 10; departs in September. Raises 1 or 2 broods. Eggs 3-5, white. Nest of hay, mud, and hair or feathers, on beams or in bird-houses. Eggs laid May to July. Feeds on insects. Beneficial. Note like other swallows, but much less frequently uttered.

131. *Clivicola riparia* (Linn.).

BANK SWALLOW.

Above and band across breast, mouse-brown; beneath, white. Length, 5 inches.

Common summer resident. Earliest arrival, May 2; departs late in August. Raises 2 broods. Eggs 3-6, white. Nest of feathers, at end of a tunnel excavated by the birds in a sand bank. Eggs laid in June and July. Feeds on insects. Beneficial. Note, weaker and less frequent than those of other swallows.

132. *Stelgidopteryx serripennis* (Aud.).

ROUGH-WINGED SWALLOW.

Brownish-gray, whitening on under tail coverts. Length, $5\frac{1}{2}$ inches.

Very rare. One instance. Easthampton, May, 1851. W. S. Clark. Now in the collection of Amherst birds in the Amherst college museum.

133. *Ampelis cedrorum* (Vieill.).

CEDAR-BIRD. CHERRY-BIRD.

Head and crest, purplish-cinnamon, shading through olivaceous-cinnamon to clear ash on the rump; forehead, line through eye and chin, black; beneath, yellowish, shading to white on under tail coverts. Length, 7 inches.

Common, and at times abundant, summer resident. Earliest arrival, Feb. 18; departs in October. Raises 1 brood. Eggs 3-5, grayish-drab, spotted with black and purplish. Nest of fine roots, etc. in a low tree. Eggs laid in July. Feeds on seeds, fruit, buds and insects. Probably not injurious. Notes, very feeble.

134. *Lanius borealis* Vieill.

BUTCHER-BIRD. GREAT NORTHERN SHRIKE.

Above, clear bluish-ash; rump and beneath, white; breast barred with fine, wavy lines of black. Length, 9-10 inches.

Uncommon winter visitor. Arrives in November; departs in April. Feeds on insects, birds and mice. Probably beneficial. Very silent with us, but said to be a fine singer.

135. *Lanius ludovicianus* Linn.

LOGGERHEAD SHRIKE.

Above, light slate color; beneath white; wings and tail, black and white. Length, 8-9 inches.

Very rare, accidental visitor. One instance. Amherst, April, 1884. C. R. Kenfield.

In this specimen the rump is white, and in the first edition of this work, it was recorded as the subspecies *excubitorides*. Chapman however considers New England specimens with white rumps as more probably the eastern *ludovicianus* than the western *excubitorides*.

136. *Vireo olivaceus* (Linn.).**RED-EYED VIREO.**

Above, clear olive-green; beneath, white; crown, ashy bordered on each side by blackish; a conspicuous white line over the eye; iris, red. Length, about 6 inches.

Abundant summer resident. Earliest arrival, May 6; departs in September. Raises 1 or 2 broods. Eggs 3-5, white spotted at the larger end with blackish, Nest of strips of bark, fine grass, cobwebs, paper, etc., neatly and compactly woven together, pensive in the fork of a twig usually within 6 or 8 feet of the ground, Eggs laid in June and July. Feeds on insects. Beneficial. Notes, loud and clear, especially noticeable in the middle of hot summer days, when few other birds sing. Our commonest vireo and found not only in woodland, but in orchards and among shade trees, even within the village.

137. *Vireo gilvus* (Vieill.).**WARBLING VIREO.**

Above, ashy olive-green; beneath, white with a yellow tinge. Length 5½-6 inches.

Not very common summer resident. Earliest arrival May 5; departs in September. Habits, eggs and nest like the preceding species but the nest is usually in a tall tree. A very sweet singer.

138. *Vireo flavifrons* (Vieill.).**YELLOW-THROATED VIREO.**

Above, olive-green, shading into ash on the rump; throat and breast, bright yellow; belly white. Length, 6 inches.

Not uncommon in May and probably breeds, though it has not been noted here in summer. Earliest arrival May 13. Habits, eggs and nest similar to the preceding species, but the nest is covered externally with lichens. Notes, richer, deeper and more deliberate than those of the red-eyed vireo.

139. Vireo solitarius (Wils.).**SOLITARY VIREO. BLUE-HEADED VIREO.**

Above, olive-green; crown, ashy-blue with a broad white line from nostril to eye; beneath, white. Length, $5\frac{1}{2}$ inches.

Common migrant but very rare summer resident. Earliest arrival April 26; departs in October. Habits, eggs and nest like those of the red-eyed vireo, but the song is more varied and musical.

140. Vireo noveboracensis (Gmel.).**WHITE-EYED VIREO.**

Above, bright olive-green; beneath, white; sides and under tail coverts yellow; two yellowish wing bars; iris, white. Length, $5\frac{1}{2}$ inches.

Very rare visitor in May, in low, swampy, thickets.

141. Mniotilta varia (Linn.).**BLACK AND WHITE WARBLER. BLACK AND WHITE CREEPER.**

Above, black marked with white; beneath white, in male spotted with black. Length, $5\text{--}5\frac{1}{2}$ inches.

Common migrant but rare summer resident. Earliest arrival April 28; departs in September. Raises 1 brood. Eggs 3-5, white, marked with reddish. Nest of grass, leaves, hair, etc., on the ground at foot of a stump, in a swamp. Eggs laid in June. Feeds on insects. Beneficial. Notes, weak and infrequent.

142. Protonotaria citrea (Bodd.).**PROTHONOTARY WARBLER.**

Golden-yellow shading into bluish-ash on rump and tail; most of the tail feathers marked with white. Length, $5\frac{1}{2}$ inches.

Very rare, accidental visitor from the south. One instance. Northampton, May, 1883. E. O. Damon.

143. *Helmitherus vermivorus* (Gmel.).

WORM-EATING WARBLER.

Crown with four black and three olive-buff stripes; above, olive-green; beneath, whitish cream-buff. Length, $5\frac{1}{2}$ inches.

Very rare, accidental visitor from the south. One instance. Easthampton. Date? (*fide* Morris).

144. *Helminthophila chrysoptera* (Linn.).

GOLDEN-WINGED WARBLER.

Above, slaty-blue; beneath, white; crown and patch on wing, yellow; in male, a black patch on throat. Length, 5 inches.

Very rare visitor. One instance. Amherst. Date? (W. A. Stearns),

145. *Helminthophila ruficapilla* (Wils.).

NASHVILLE WARBLER.

Above, olive-green; head, ashy; beneath, yellow; crown in male, chestnut. Length, $4\frac{3}{4}$ inches.

Common migrant in May and September. Earliest arrival, May 3. Feeds on insects. Beneficial. Note, a sharp *chip*; a sweet but weak singer.

146. *Compsothlypis americana* (Linn.).

**PARULA WARBLER. BLUE YELLOW-BACKED
WARBLER.**

Above, blue; middle of back, golden-brown; beneath, yellow; a brown spot on throat of male. Length, $4\frac{3}{4}$ inches.

Common migrant in May, September and October. Earliest arrival, May 6. Feeds on insects, in high trees chiefly. Beneficial. Notes, weak and insect-like.

147. *Dendroica tigrina* (Gmel.).

CAPE MAY WARBLER.

Above, black and yellowish-olive; rump, sides of head and neck, and beneath, yellow; under parts streaked with black; ear coverts, bright orange-brown. Length, 5-5½ inches.

Irregular, usually rare, migrant in May; some seasons, it is not uncommon.

148. *Dendroica aestiva* (Gmel.).

YELLOW WABBLER.

Bright yellow; in male, streaked beneath with reddish. Length, 5 inches.

Common summer resident. Earliest arrival April 28; departs in September. Raises 1 brood. Eggs 3-5, white, spotted with brown. Nest of grass, fine strips of bark, hair, etc. in trees or bushes. Eggs laid in June. Feeds on insects. Beneficial. A pleasant but not powerful singer; sometimes the song is written, “*wee-chee, chee, chee, cher-wee*” (Chapman).

149. *Dendroica caerulescens* (Gmel.).

BLACK-THROATED BLUE WARBLER.

MALE: Above, blue; beneath white; throat and breast, black.

FEMALE: Above, clear olive; beneath, pale soiled yellowish.

Common migrant in May and September. Earliest arrival, May 5. Possibly breeds in some of the hill towns. Habits like other warblers. Rather quiet and not much of a singer.

150. *Dendroica coronata* (Linn.).

MYRTLE WARBLER. YELLOW-RUMPED WARBLER.

Above, slate-blue, streaked with black; rump, crown and spot on side, yellow; breast, black; throat and belly, white. Length, 5-6 inches.

Abundant migrant in May, September and October. Earliest arrival, April 25. Habits and song like other warblers, though it associates with sparrows and feeds on the ground.

151. *Dendroica maculosa* (Gmel.).**MAGNOLIA WARBLER. BLACK AND YELLOW
WARBLER.**

Crown, ash; back, black; rump and beneath, yellow; under parts streaked with black. Length, 5 inches.

Uncommon migrant in May and September. Earliest arrival, May 9 (Miss Morse). Habits and song like other warblers.

152. *Dendroica rara* (Wils.).**CAERULEAN WARBLER.**

MALE: Upper parts and band across breast, blue; back, streaked with black; throat and belly, white.

FEMALE: Dull greenish-olive; beneath, yellowish-white. Length, 4-4½ inches.

Very rare, accidental visitor from the south. One instance. Amherst, May 19, 1884. Three females. W. A. Stearns.

153. *Dendroica pensylvanica* (Linn.).**CHESTNUT-SIDED WARBLER.**

Back, streaked with black and yellow; crown, yellow; beneath, pure white; sides, chestnut. Young, clear yellowish-green above and pure white beneath. Length, 5 inches.

Common migrant and not rare summer resident. Earliest arrival, May 7; departs in September. Raises 1 brood. Eggs 4-5, white, spotted with reddish brown. Nest of grass and weeds, in low bushes. Eggs laid early in June. Feeds on insects. Beneficial. Notes like those of the yellow warbler.

154. *Dendroica castanea* (Wils.).**BAY-BREASTED WARBLER.**

Above, streaked with black and grayish-olive; crown and most of under parts, chestnut; rest of underparts, ochrey. Length, 5½ inches.

Rare and irregular migrant in May and September.

155. *Dendroica striata* (Forst.).**BLACK-POLL WARBLER.**

MALE: Above, grayish-olive streaked with black; crown, black; beneath, pure white, streaked on the sides.

FEMALE: Above, greeish-clive, with dusky streaks; beneath white; sides streaked. Length, $5\frac{1}{4}$ inches,

Uncommon, very late migrant. Earliest arrival, May 26. Seen again in October. Habits and notes, not specially peculiar.

156. *Dendroica blackburniae* (Gmel.).**BLACKBURNIAN WARBLER.**

MALE: Above, black; belly, yellowish-white; spot on crown, throat and breast, fire-orange.

FEMALE: Brownish-olive, where male is black; yellow, where he is orange. Length, $5\frac{1}{2}$ inches.

Uncommon migrant in May and September. Habits and song not specially peculiar.

157. *Dendroica virens* (Gmel.).**BLACK-THROATED GREEN WARBLER.**

Back and crown, cleary yellow-olive; throat, black; forehead and sides of head, yellow; under parts, white. Length, 5 inches.

Common migrant in May, September and October. Earliest arrival, April 29; have seen a pair in Amherst, June 9, but there is no record of their breeding, though they probably do. Nest in coniferous trees, 15-50 feet from the ground, but eggs, habits and song much like the other warblers.

158. *Dendroica vigorsii* (Aud.).**PINE WARBLER.**

Olive-yellow; beneath, yellow; belly, white. Female duller. Length, 6 inches.

Common migrant in April and May. Mr. Stearns calls it "a very probable resident" and says he has taken it in nearly

every month of the year.. Nest, eggs, habits and song not specially different from other warblers.

159. *Dendroica palmarum hypochrysea* Ridgw.

YELLOW RED-POLL WARBLER.

Brownish-olive; rump, brighter; crown, reddish-chestnut; beneath, yellow, streaked on throat and sides with reddish. Length, 5 inches.

Common migrant in April, May and September. Earliest arrival April 17. Habits somewhat sparrow-like. Song a simple trill.

160. *Seiurus aurocapillus* (Linn.).

OVEN-BIRD. GOLDEN-CROWNED THRUSH.

Olive-green; crown, golden-brown; beneath, cream-white, spotted with brown. Length, 6-6½ inches.

Common summer resident. Earliest arrival, May 7; departs in September. Raises 2 broods. Eggs 4-5, white, spotted with brown. Nest of leaves, twigs, grass, etc. on the ground in damp woods; completely arched over, with entrance on the side. Eggs laid in June and July. Feeds on insects. Beneficial. A charming singer; song, a loud, clear chant; written, "teacher, *teacher*, TEACHER, TEACHER," (Burroughs).

161. *Seiurus noveboracensis* (Gmel.).

WATER THRUSH.

Dark olive-brown; beneath, pale sulphur-yellow, streaked with black. Length, 6 inches.

Rare and irregular migrant in May. Earliest arrival, April 29. Feeds on insects. Beneficial. Song, not peculiar or noteworthy.

162. *Seiurus motacilla* (Vieill.).**LOUISIANA WATER THRUSH.**

Dark olive-brown; beneath white, tinged with buff, streaked with black except on throat and middle of belly. Length, 6 inches.

Very rare visitor from the south. Two instances. Female, Leverett, May 18, 1871; W. A. Stearns. Male, Amherst, July 12, 1886; H. L. Clark.

163. *Geothlypis agilis* (Wils.).**CONNECTICUT WARBLER.**

Olive-green; beneath, yellow; crown and throat, ash. Length, 6 inches.

Very rare migrant. Mr. Stearns says "several have been taken here in former years."

164. *Geothlypis philadelphia* (Wils.).**MOURNING WARBLER.**

Bright olive; beneath, yellow; throat feathers, black tipped with ash or yellow. Length, $5\frac{1}{2}$ inches.

Very rare migrant. One instance; Amherst? 1872; Sidney Dickinson.

165. *Geothlypis trichas* (Linn.).**MARYLAND YELLOWTHROAT.**

Above, yellow-olive; beneath yellow; in male, front and sides of head, black bordered behind by gray. Length, 5 inches.

Common summer resident. Earliest arrival, May 5; departs in October. Raises 2 broods. Eggs 3-5, white, spotted with reddish-brown. Nest of fine grass and leaves, either in a tuft of swamp grass or pensile in a group of ferns. Eggs laid in May and July. Feeds on insects. Beneficial. Notes, clear and energetic; may be written "*witchery-witchery-witchery*."

166. *Icteria virens* (Linn.).

YELLOW-BREASTED CHAT.

Bright olive-green; beneath, yellow; belly, white. Length, $7\frac{1}{2}$ inches.

Very rare visitor from the south. Two instances. Male; Amherst, June 22, 1886; H. L. Clark. Male and female; Amherst, May 18, 1887; H. L. Clark. Said to be now a regular summer resident at Springfield (Morris).

167. *Wilsonia pusilla* (Linn.).

WILSON'S WARBLER. BLACK-CAP.

Above, bright yellow-olive; beneath yellow; crown of male, blue-black. Length, 5 inches.

Rare and irregular migrant in May, in low wet woods. Feeds on insects. Beneficial. Notes, feeble and unmusical.

168. *Wilsonia canadensis* (Linn.).

CANADIAN WARBLER.

Above, ashy; beneath, yellow; a necklace of black or dusky spots across the breast; in male, sides of neck, black. Length, 5 inches.

Uncommon but regular migrant in May and September. Earliest arrival, May 13. Habits like the preceding but song is louder and sweeter.

169. *Setophaga ruticilla* (Linn.).

RED START.

MALE: Black; belly, white; sides and basal half of wing and tail feathers salmon-red.

FEMALE: Ashy-olive, where male is black; yellow, where he is red. Length, $5\frac{1}{2}$ inches.

Common migrant in May, June and September and probable summer resident. Earliest arrival, May 7. Eggs 4-5, whitish, spotted and blotched with brown. Nest of fine strips of bark, leaf stalks and plant down, in the crotch of a sapling in low woodland. Feeds on insects. Beneficial. Notes, warbler-

like ; sometimes written "*chiny, ching, chee; ser-wee, swee, swee-e-e*" (Chapman).

170. *Anthus pensilvanicus* (Lath.)

TITLARK.

Dark olive-brown; beneath, buff streaked with dusky. Length, 6.7 inches.

Very rare migrant. Two instances. A small flock, Hadley, May 3, 1884; C. R. Kenfield. Oct. 31, 1891; I. C. Greene.

171. *Galeoscoptes carolinensis* (Linn.).

CATBIRD.

Slate-colored; crown, black; under tail coverts, chestnut. Length, 8.9 inches.

Abundant summer resident. Earliest arrival, May 2; departs in October or November. Raises 2 broods. Eggs 3-5, dark greenish-blue. Nest of twigs and roots in shrubbery. Eggs laid in May and June. Feeds on insects, berries, fruit, etc. Beneficial. Usual note, disagreeable and catlike; but really a charming singer and mocking bird.

172. *Harporhynchus rufus* (Linn.).

BROWN THRASHER. BROWN THRUSH.

Above, rich rust-red; beneath cream-color, spotted with blackish. Length, 11 inches.

Common summer resident. Earliest arrival, April 26; departs in October. Raises 1 brood. Eggs 3-6, bluish, thickly spotted with fine dots of brown. Nest of sticks, leaves and roots, in a low tree or bush or on the ground. Eggs laid in June. Feeds on insects and berries. Beneficial. Our finest singer and a good mocking bird.

173. *Troglodytes aedon* Vieill.

HOUSE WREN.

Above, brown; beneath grayish-brown, everywhere waved with a darker shade. Length, 5 inches.

Uncommon summer resident. Earliest arrival, April 5; departs in September. Raises 2 broods. Eggs 4-8, almost fawn color. Nest of twigs and rubbish in a hole in a tree, or in a bird house. Eggs laid in May and June. Feeds on insects. Beneficial. Song energetic but lacking in volume.

174. *Troglodytes hiemalis* Vieill.

WINTER WREN.

Above, brown; rump, with white spots; beneath brownish; everywhere waved or barred with darker. Length, 4 inches.

Rare and irregular migrant, in April and October; more common in the fall than in the spring. Similar to preceding in food and manners, but said to be a very fine singer.

175. *Certhia familiaris americana* (Bonap.).

BROWN CREEPER.

Above, dark brown streaked with whitish; beneath, whitish. Length, 5½ inches.

Probable resident; common in spring and fall not rare in winter, but very rare in summer. Eggs 5-8, white, speckled with brown. Nest of twigs, bark, dead wood, moss, etc. placed behind the loose bark of a tree. Feeds on insects. Very beneficial. Notes, insignificant.

176. *Sitta carolinensis* Lath.

WHITE-BREASTED NUTHATCH.

Above, ashy-blue; beneath, white; crown, black or ash. Length, 6 inches.

Resident, abundant in fall, winter and spring, but rare in summer. Raises 1 brood. Eggs 4-6, white, speckled with reddish and lilac. Nest of fur, feathers, grass, etc. in a hole in a tree. Eggs laid in June. Feeds on insects. Beneficial. Note, a peculiar "quank."

177. *Sitta canadensis* Linn.

RED-BREASTED NUTHATCH.

Above, bluish-ash; beneath, rusty-brown; crown, black. Length, $4\frac{1}{2}$ inches.

Rare and irregular winter visitor, from November to April. Habits like the preceding, but note, higher pitched.

178. *Parus atricapillus* (Linn.).

CHICKADEE. BLACK-CAPPED TITMOUSE.

Above, brownish-ash; beneath, whitish; crown and throat, black. Length, 5 inches.

Abundant resident, least common in summer. Raises 1 or 2 broods. Eggs 4-6, white, spotted with pink. Nest of fur, feathers, etc. in a hole in a stump or fence post. Eggs laid in May and June. Feeds on insects, chiefly. Beneficial. Notes, the well known "*chick-a-dee-dee-dee*" or a plaintive "*phoe-bee*".

179. *Regulus satrapa* Licht.

GOLDEN CROWNED KINGLET.

Above, greenish-olive; beneath, yellowish-white; patch on crown, orange or yellow, bordered by black. Length, 4 inches.

Rather common winter visitor. Earliest arrival, Oct. 18; departs northward in April. Feeds on insects. Beneficial. Not much of a musician.

180. *Regulus calendula* (Linn.).

RUBY-CROWNED KINGLET.

Above, dull greenish-olive; beneath, yellowish-white; male with a ruby-red patch on crown. Length, $4\frac{1}{2}$ inches.

Common migrant in October and November, April and May. Feeds on insects. Beneficial. A very fine singer for so small a bird, though generally silent in the fall.

181. *Turdus mustelinus* Gmel.**WOOD THRUSH. SONG THRUSH.**

Above, tawny-brown, shading into olive on rump and tail; beneath, white, spotted with blackish. Length $7\frac{1}{2}$ -8 inches.

Not very common summer resident. Earliest arrival, May 8; departs in September. Raises 1 or 2 broods. Eggs 3-5, pale blue. Nest of grass, leaves, mud, etc. in a low bush or tree, six or eight feet from ground. Eggs laid in May and July. Feeds on insects. Beneficial. A remarkably fine singer; the clear, flute-like call-notes have been written "*Cóme-to-mé.*" (Chapman).

182. *Turdus fuscescens* Steph.**WILSON'S THRUSH. VEERY.**

Above, reddish-brown; beneath, white; breast, with a tinge of buff and small, indistinct wedge-shaped spots. Length, $7\frac{1}{2}$ inches.

Common summer resident. Earliest arrival, May 3; departs in September. Raises 1 brood. Eggs 3-5, blue. Nest of grass, leaves, bark, etc., on or near the ground. Eggs laid last of May. Feeds on insects. Beneficial. A pleasant singer; the usual call note is a loud, clear, whistled "*whèeu.*"

183. *Turdus ustulatus swainsonii* (Cab.).**OLIVE-BACKED THRUSH.**

Above, clear olivaceous; beneath, yellowish-white, marked with large, broad spots of dusky. Length $7\frac{1}{2}$ inches.

Rare and irregular migrant in May and September. Occurs in the less frequented woods and is rather shy. Feeds on insects. Beneficial. Practically silent while with us.

184. *Turdus aonalaschkae pallasii* (Cab.).**HERMIT THRUSH.**

Above, olivaceous, shading into rufous on rump and tail; beneath, white, thickly spotted with dusky. Length, 7 inches.

Common migrant in April, May and October. Earliest

arrival, April 8. Reported several times as breeding but the evidence is unsatisfactory. Feeds on insects. Beneficial. A very fine singer in the late spring.

185. *Merula migratoria* (Linn.).

ROBIN.

Above, ashy; head, black; breast, rufous; belly, white. Length, 10 inches.

Abundant summer resident. Earliest arrival, Feb. 20 (I. C. Greene); departs in November. Very probably some winter. Raises 2-3 broods. Eggs 3-6, blue. Nest of mud, and grass, in tree, on a fence, or about a building. Eggs laid in May, June and July. Feeds on insects, worms, seeds, fruit, etc. Beneficial. A very good singer.

186. *Sialia sialis* (Linn.).

BLUEBIRD.

Above, blue; breast, chestnut; belly, white. Length, 7 inches.

Common summer resident, sometimes abundant. Earliest arrival, Feb. 20; departs in October. Raises 2 or 3 broods. Eggs 4-7, pale blue. Nest of fine grass, in a hole in a tree or in a bird house. Eggs laid from April to June. Feeds on insects, etc. Beneficial. A pleasing singer; call-note clear and characteristic of opening spring.

ERRATA.

- Page 30, line 4, "Toes 3, all in front"—omit "all in front."
Page 59, line 4, for "black, chestnut"—read "back, chestnut."
Page 69, line 12, omit "in."
Page 71, No. 98a, for "AVENUS"—read "AENEUS."
Page 82, next to last line, for "*ludoivcianus*"—read "*ludovicianus*."
Page 83, No. 138, for "FLAVIFROUS"—read "flavifrons."
Page 86, line 21, after "yellowish"—add "Length $5\frac{1}{2}$ inches."
Page 88, line 5, for "greeish"—read "greenish,"
Page 88, line 20, for "cleary"—read "clear."
Page 91, No. 169, for "RED START"—read "Redstart."
Page 94, No. 179, for "SATRARA"—read "SATRAPA."

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Second Edition : Revised and Rewritten.

THE
BIRDS OF AMHERST
AND VICINITY,

INCLUDING NEARLY THE WHOLE OF HAMPSHIRE COUNTY,
MASSACHUSETTS.

HUBERT LYMAN CLARK.

WITH AN INTRODUCTION BY
PROFESSOR CHARLES H. FERNALD, PH. D.

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